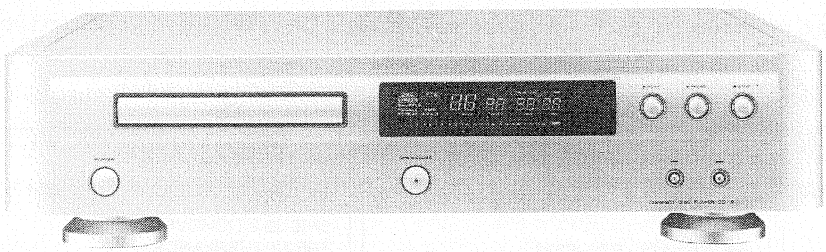
Service Manual

74 CD14/02B/02G

Compact disc player



COMPACT disc DIGITAL AUDIO

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Please use this service manual with referring to the user guide (D.F.U.) without fail.

marantz®

model CD-14

PCS 88 911

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SHOCK, FIRE HAZARD SERVICE TEST :

CAUTION : After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or Front Panel of product and controls and chassis bottom.

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before it is return to the user/customer.

Ref. UL Standard NO. 1492.

In case os difficulties, do not hesitate to contact the Technical Department at above mentioned address.

1. TECHNICAL SPECIFICATIONS

Audio Characteristics

Channels ..... 2 channels
Sampling frequency ..... 44.1 kHz
Quantization ..... 16-bit linear/channel
Error correction Cross-interleave read solomon code (CIRC)
D/A conversion ..... 1-bit linear/channel
Wow & flutter ..... Precision of quartz

Optical Readout System

Laser ..... AlGaAs semiconductor
Wavelength ..... 780 nm

Frequency Characteristics

Frequency range ..... 20 Hz - 20 kHz
Dynamic range ..... > 98 dB
S/N ratio ..... > 110 dB
Channel separation (1 kHz) ..... > 103 dB
THD (1 kHz) ..... 0.0015 %
Analog output
Output level (unbalanced) ..... 2.2 V RMS
Output level (balanced) ..... 4.4 V RMS
Output impededanced ..... 250 ohms
Digital output
Output level (cinch JACK) ..... 0.5 Vp-p/75 ohms
Output level (optical) ..... -19 dBm

Power Supply

/02, version ..... 115 / 230 AC 50/60 Hz
Power Consumption ..... 16 W

Cabinet, etc.

Dimensions
Width ..... 458 mm
Height ..... 110 mm
Depth ..... 369 mm
Netweight ..... 11 kg

Operating temperatures ..... +5 °C ~ +35 °C
Operating humidity ..... 5 % ~ 90 % (without dew)

Accessories

Remote control unit (RC-D16CD) 1
AAA (R03) Batteries 2
Stereo audio cable with cinch pins ..... 1 pair
AC power cord 1

Specifications subject to change without prior notice.

2. SERVICE MODE

1. How to enter into the Service Mode
   - Turn the power on while pressing 3 of [STOP], [PLAY], [OPEN/CLOSE] buttons.

2. Mode 0 (Display P 00)
   Condition: [FOCUS OFF] [SPINDLE OFF] [RADIAL OFF] [MUTE ON]
   - The sled moves outside when pressing [CUE]/[REVIEW] buttons. (From Remocon)
   - The function moves to Mode 1 when pressing [NEXT] button.

3. Mode 1 (Display P 01)
   Condition: [FOCUS ON] [SPINDLE OFF] [RADIAL OFF] [MUTE ON]
   - The function moves to Mode 2 when pressing [NEXT] button.
   - The function moves to Mode 0 when pressing [PREV] button.

4. Mode 2 (Display P 02)
   Condition: [FOCUS ON] [SPINDLE ON] [RADIAL OFF] [MUTE ON]
   - The function moves to Mode 3 when pressing [NEXT] button.
   - The function moves to Mode 0 when pressing [PREV] button.

5. Mode 3 (Display P 03)
   Condition: [FOCUS ON] [SPINDLE ON] [RADIAL ON] [MUTE OFF]
   - The Sled moves outside when pressing [CUE] button. (From Remocon)
   - The Sled moves inside when pressing [REVIEW] button. (From Remocon)
   - The function moves to Mode 2 when pressing [PREV] button.

* The following button operation can be available at all of the conditions of the service mode.
1) All of FL display light by pressing [STOP] button.
2) Model Number and Version Nbr of the µ-processor are displayed by pressing [PAUSE] button.

Cd16 - 2 : 10
Model Name
µ-Processor Version Nbr.

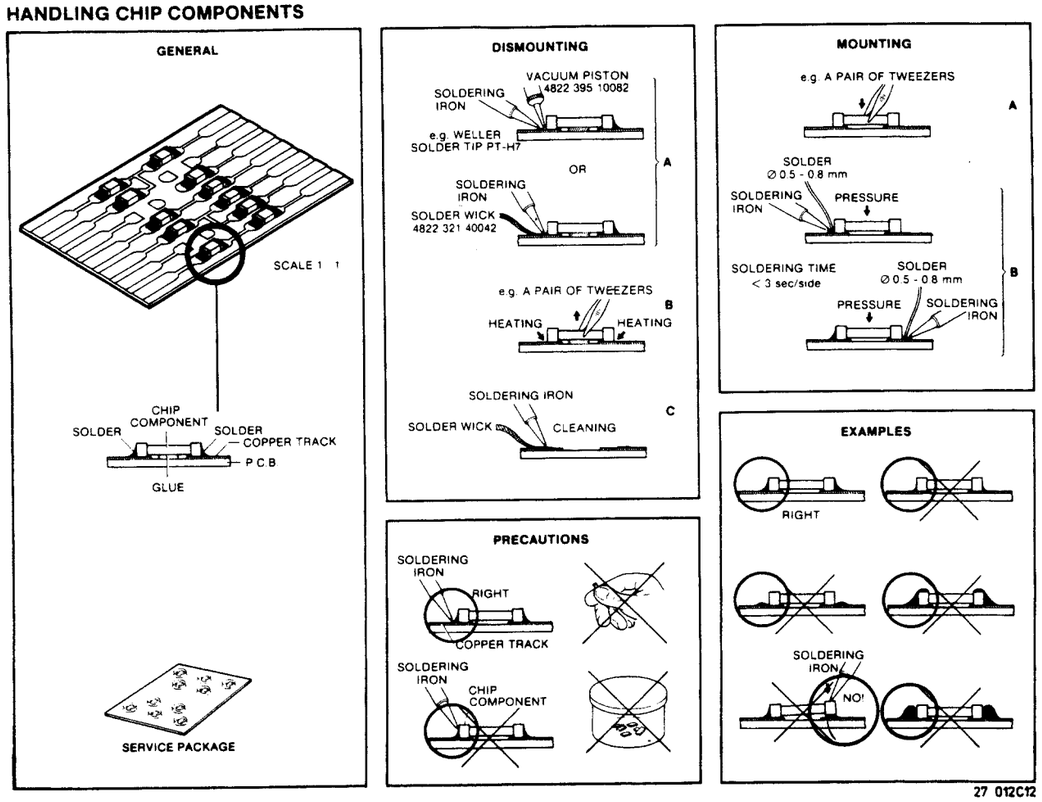
3) The same as Normal operation (except Service mode) is performed by pressing [PLAY] button.
However if some default is detected, an error code is displayed. (For example: Err 10)
The content for each error code is shown below.

Error Code	Error
Err 02	FOCUS Error
Err 07	SUB CODE Error
Err 08	T. O. C. Error
Err 09	DECODER Error
Err 10	RADIAL Error
Err 11, 12	SLEDGE Error
Err 13	SPINDLE Error
Eff 16 ~ 20	SEARCH Error
Err 30	DOOR Error
Err 31	TRAY Error
Err 32 ~ 47	BUTTON INPUT Error

6. Cancelling the Service Mode
   - The Service Mode is cancelled by turning the power off.

3. SERVICING HINTS

HANDLING CHIP COMPONENTS



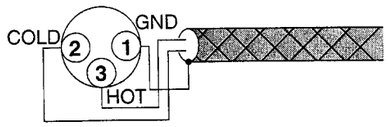
4. SERVICE TOOLS

Audio signals disc	4822 397 30184
Disc without errors (SBC444)+	
Disc with DO errors, black spots and fingerprints (SBC444A)	4822 397 30245
Disc (65 min 1kHz) without no pause	4822 397 30155
Max. diameter disc (58.0 mm)	4822 397 60141
Torx screwdrivers	
Set (straight)	4822 395 50145
Set (square)	4822 395 50132
13th order filter	4822 395 30204
Hexagon socket screw button (No. 1.5)	

5. BALANCE JACKS

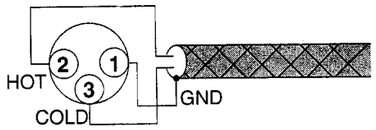
- The balanced output connector uses a XLR connector.
- The XLR connector for professional use is internally wire either of the following two systems.

1. USA system (PIN ② = COLD, PIN ③ = HOT)



(XLR)

2. European system (PIN ② = HOT, ③ PIN= COLD)



(XLR)

- The CD-14 uses the USA system of 1.
  When a preamp or main amplifier adopting the European system is connected using a cable with XLR balanced connectors, the reproduced signal may be inverted of phase. In this case, correct the wiring of the one of the XLR connectors on the extremities of the cable to the USA system by exchanging the connections of pins ② and ③. This will make it possible to play the signal with the correct phase.

6. MICROPROCESSOR AND IC DATA

Q106/Q107/Q108 TDA7073A

PIN	SYMBOL	DESCRIPTION
1	IN1-	negative input 1
2	IN1+	positive input 1
3	n.c.	not connected
4	n.c.	not connected
5	VP	positive supply voltage
6	IN2+	positive input 2
7	IN2-	negative input 2
8	n.c.	not connected
9	OUT2+	positive output 2
10	GND2	ground 2
11	n.c.	not connected
12	OUT2-	negative output 2
13	OUT1-	negative output 1
14	GND1	ground 1
15	n.c.	not connected
16	OUT1+	positive output 1

Q502 TDA1307

PIN	SYMBOL	I/O	DESCRIPTION
1	WS	I	word select input to data interface
2	SCK	I	clock input to data interface
3	SD	I	data input to interface
4	EFAB	I	(1) error flag (active HIGH): input from decoder chip indicating unreliable data
5	SBCL	I	subcode clock: a 10-bit burst clock (typ. 2.8224 MHz) input which synchronizes the subcode data
6	SBDA	I	subcode data: a 10-bit burst of data, including flags and sync bits, serially input once per frame, clocked by burst clock input SBCL
7	CDEC	O	decoder clock output: frequency division programmable by means of pins 14 (CLC1) and 17 (CLC2) to output 192, 256, 384 or 768 times fs
8	VDDC3		positive supply 3
9	VSSC2		ground 2
10	DOBM	O	digital audio output: this output contains digital audio samples which have received interpolation, attenuation and muting plus subcode data; transmission is in biphase-mark code
11	DSL	O	digital silence detected (active LOW) on left channel
12	DSR	O	digital silence detected (active LOW) on right channel
13	DSTB	I	(2) DOBM standby mode enforce pin (active HIGH)
14	CLC1	I	application mode programming pin for CDEC (pin 7) frequency division
15	CMIC	O	clock output, provided to be used as running clock by microprocessor (in master mode only), output 96fs
16	VSSC3		ground 3
17	CLC2	I	application mode programming pin for CDEC (pin 7) frequency division
18	CDCC	I	master / slave mode selection pin
19	RESYNC	O	resynchronization: out-of-lock indication from data input section (active HIGH)
20	POR	I	(2) power-on reset (active LOW)
21	VDDC1		supply voltage 1
22	XTAL1	I	crystal oscillator terminal; local crystal oscillator sense forced input in slave mode
23	XTAL2	O	crystal oscillator output; drive output to crystal
24	VDDOSC		positive supply connection to crystal oscillator circuitry
25	VSSOSC		ground connection to crystal oscillator circuitry
26	MODE	I	(2) evaluation mode programming pin (active LOW); in normal operation, this pin should be left open-circuit or connected to the positive supply
27	DOL	O	data output left channel to bitstream DAC TDA1547
28	NDOL	O	complementary data output left channel to TDA1547 in double differential mode
29	VDDAL		positive supply connection to output data driving circuitry, left channel
30	VSSAL		ground connection to output data driving circuitry, left channel
31	VSSAR		ground connection to output data driving circuitry, right channel
32	VDDAR		positive supply connection to output data driving circuitry, right channel
33	DOR	O	data output right channel to TDA1547
34	NDOR	O	complementary data output right channel to TDA1547 in double differential mode
35	CDAC	O	clock output to bitstream DAC TDA1547
36	TEST1	I	(1) test mode input; in normal operation this pin should be connected to ground
37	TEST2	I	(1) test mode input; in normal operation this pin should be connected to ground
38	DA	I/O	(2) bidirectional data line intended for control data from the microprocessor and peak data from the TDA1307
39	CL	I	(2) clock input, to be generated by the microprocessor
40	VSSC1		ground 1
41	VDDC2		supply voltage 2
42	RAB	I	(2) command / peak data request lin

Notes (1):These pins are configured as internal pull-down.
(2):These pins are configured as internal pull-up.

QD01/QD02 TDA1547

PIN	SYMBOL	DESCRIPTION
1	DGND	0 V digital supply
2	VDDD	5 V digital supply for both channels
3	IN R	serial one-bit data input for the right channel
4	n.c.	pin not connected; should preferably be connected to digital ground
5	CLK R	clock input for the right channel
6	VDDD R	5 V digital supply for the right channel; this voltage determines the internal logic HIGH level in the right channel
7	VSSD R	-3.5 V digital supply for the right channel; this voltage determines the internal logic LOW level in the right channel
8	Vref R	-4 V reference voltage for the right channel switched capacitor DAC AGND
9	DAC R	0 V reference voltage for the right channel switched capacitor DAC; this pin should be connected to analog ground
10	-DACR	output from the right negative switched capacitor DAC; feedback connection for the right negative operational amplifier
11	+DAC R	output from the right positive switched capacitor DAC; feedback connection for the right positive operational amplifier
12	AGND R	0 V reference voltage for both right channel operational amplifiers
13	n. c.	pin not connected; should preferably be connected to analog ground
14	+OUT R	+ output of the switched capacitor operational amplifier
15	-OUT R	- output of the switched capacitor operational amplifier
16	VSSA	-5 V analog supply
17	VDDA	5 V analog supply
18	-OUT L	- output of the switched capacitor operational amplifier
19	+OUT L	+ output of the switched capacitor operational amplifier
20	n.c.	pin not connected; should preferably be connected to analog ground
21	AGND L	0 V reference voltage for both left channel operational amplifiers
22	+DACL	output from the left positive switched capacitor DAC; feedback connection for the left positive operational amplifier
23	-DAC L	output from the left negative switched capacitor DAC; feedback connection for left negative operational amplifier
24	AGND DAC L	0 V reference voltage for the left channel switched capacitor DAC; this pin should be connected to analog ground
25	Vref L	-4 V reference voltage for the left channel switched capacitor DAC
26	VSSD L	-3.5 V digital supply for the left channel; this voltage determines the internal logic LOW level in the left channel
27	VDDD L	5 V digital supply for the left channel; this voltage determines the internal logic HIGH level in the left channel
28	CLK L	clock input for the left channel
29	n.c.	pin not connected; should preferably be connected to digital ground
30	IN L	serial one-bit data input for the left channel
31	VSSD	-5 V digital supply for both channels
32	VSUB	-5V substrate voltage

Q102 SAA7372GP

PIN	SYMBOL	DESCRIPTION
1	VSSA1	*analog ground 1
2	VDDA1	* analog supply voltage 1
3	D1	unipolar current input (central diode signal input)
4	D2	unipolar current input (central diode signal input)
5	D3	unipolar current input (central diode signal input)
6	VRL	reference voltage input for ADC
7	D4	unipolar current input (central diode signal input)
8	R1	unipolar current input (satellite diode signal input)
9	R2	unipolar current input (satellite diode signal input)
10	IrefT	current reference output for ADC calibration
11	VRH	reference voltage output from ADC
12	VSSA2	* analog ground 2
13	SELPLL	selects whether internal clock multiplier PLL is used
14	ISLICE	current feedback output from data slicer
15	HFIN	comparator signal input
16	VSSA3	* analog ground 3
17	HFREF	comparator common mode input
18	Iref	reference current output pin (nominally 0.5VDD)
19	VDDA2	* analog supply voltage 2
20	TEST1	test control input 1; this pin should be tied LOW
21	CRIN	crystal/resonator input
22	CROUT	crystal/resonator output
23	TEST2	test control input 2; this pin should be tied LOW
24	CL16	16.9344 MHz system clock output
25	CL11	11.2896 or 5.6448 MHz clock output (3-state)
26	RA	radial actuator output
27	FO	focus actuator output
28	SL	sledge control output
29	TEST3	test control input 3; this pin should be tied LOW
30	VDDD1(P)	* digital supply voltage 1 for periphery
31	DOBM	bi-phase mark output (externally buffered; 3-state)
32	VSSD1	* digital ground 1
33	MOTO1	motor output 1; versatile (3-state)
34	MOTO2	motor output 2; versatile (3-state)
35	SBSY	subcode block sync output (3-state)
36	SFSY	subcode frame sync output (3-state)
37	RCK	subcode clock input
38	SUB	P-to-W subcode output bits (3-state)
39	VSSD2	* digital ground 2
40	V5	versatile output pin 5
41	V4	versatile output pin 4
42	V3	versatile output pin 3 (open-drain)
43	KILL	kill output (programmable; open-drain)
44	EF	C2 error flag; output only defined in CD ROM modes and 1fs modes (3-state)
45	DATA	serial data output (3-state)
46	WCLK	word clock output (3-state)
47	VDDD2(P)	* digital supply voltage 2 for periphery
48	SCLK	serial bit clock output (3-state)
49	VSSD3	* digital ground 3
50	CL4	4.2336 MHz microcontroller clock output
51	SDA	microcontroller interface data I/O line (open-drain output)
52	SCL	microcontroller interface clock line input
53	RAB	microcontroller interface R/W and load control line input (4-wire bus mode)
54	SILD	microcontroller interface R/W and load control line input (4-wire-bus mode)
55	n.c.	not connected
56	VSSD4	* digital ground 4
57	RESET	power-on reset input (active LOW)
58	STATUS	servo interrupt request line/decoder status register output (open-drain)
59	VDDD3(C)	* digital supply voltage 3 for core
60	C2FAIL	indication of correction failure output (open-drain)
61	CFLG	correction flag output (open-drain)
62	V1	versatile input pin 1
63	V2	versatile input pin 2
64	LDON	laser drive on output (open-drain)

• Note : All supply pins must be connected to the same external power supply voltage.

Q101 TDA1302T

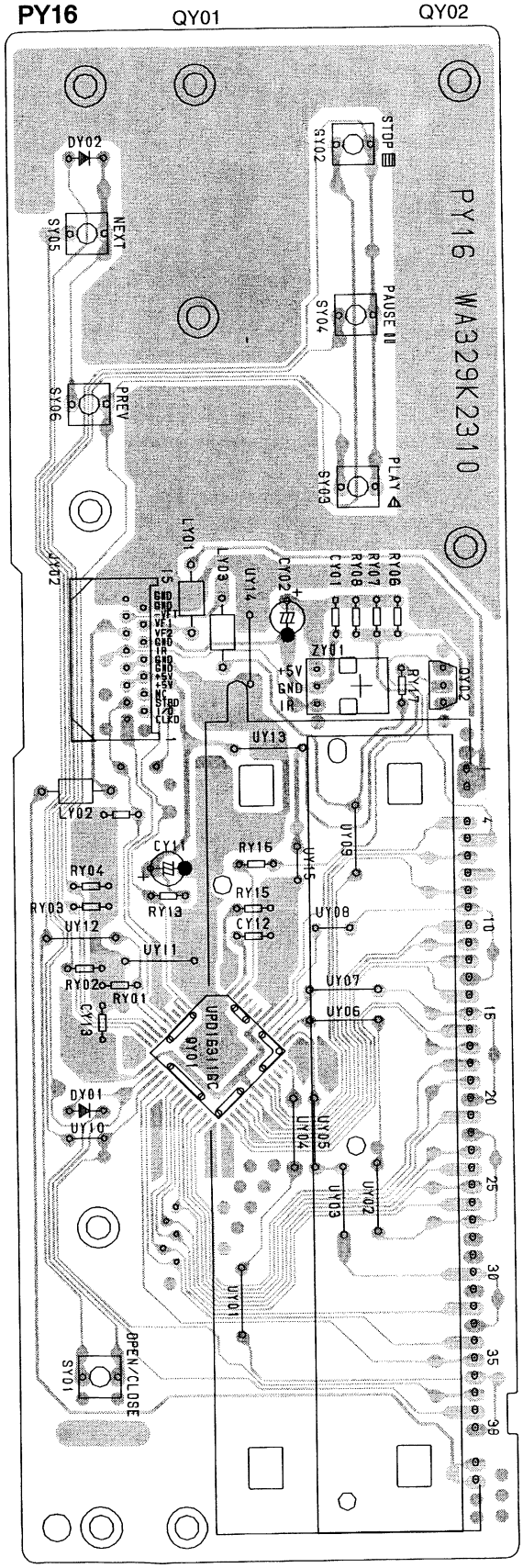
PIN	SYMBOL	DESCRIPTION
1	O4	output of diode current amplifier 4
2	O6	output of diode current amplifier 6
3	O3	output of diode current amplifier 3
4	O1	output of diode current amplifier 1
5	O5	output of diode current amplifier 5
6	O2	output of diode current amplifier 2
7	LDON	control pin for switching the laser ON and OFF
8	VDDL	laser supply voltage
9	RFE	equalized output voltage of sum signal of amplifiers 1 to 4
10	RF	unequalized output
11	HG	control pin for gain switch
12	LS	control pin for speed switch
13	CL	external capacitor
14	ADJ	reference input normally connected to ground via a resistor
15	GND	0 V supply; substrate connection (ground)
16	LO	current output to the laser diode
17	MI	laser monitor diode input
18	VDD	amplifier supply voltage
19	I2	photo detector input 2 (central)
20	I5	photo detector input 5 (satellite)
21	I1	photo detector input 1 (central)
22	I3	photo detector input 3 (central)
23	I6	photo detector input 6 (satellite)
24	I4	photo detector input 4 (central)

QY03 MN187164MXS (MICROPROCESSOR)

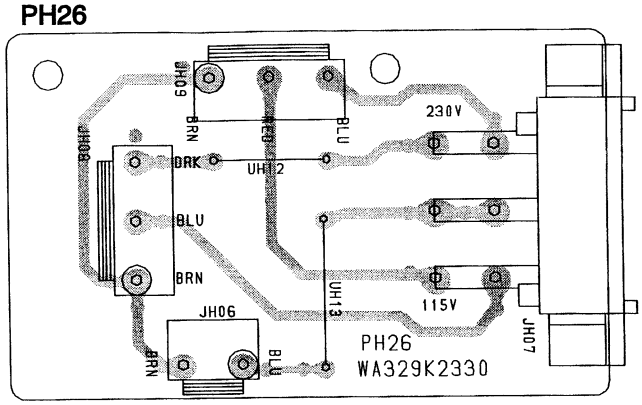
Pin No	Port	Name	I/O	ACT	Function
1	P56	SEG6	O	X	FLSEGMENT DATA.P8
2	P55	SEG5	O	X	FLSEGMENT DATA.P9
3	P54	SEG4	O	X	FLSEGMENT DATA.P10
4	P53	SEG3	O	X	FLSEGMENT DATA.P11
5	P52	SEG2	O	X	FLSEGMENT DATA.P12
6	P51	SEG1	O	X	FLSEGMENT DATA.P13
7	P50	SEG0	O	X	FLSEGMENT DATA.P14
8	VPP	VPP	I	-24	POWER SUPPLY -24V,FOR VFTD
9	VDD	VDD	I	+5	POWER SUPPLY +5V
10	OSC2	OSC2	O	O	CLOCKOUT (8.0MHz)
11	OSC1	OSC1	I	I	CLOCK in (8.0MHz)
12	VSS	VSS	-	L	GND
13	XI	VSS	I	L	GND
14	XO	NC	-	X	NOT USED
15	P27	CD7 RESET	O	H	CD7 RESET (RESET=LOW)
16	P26	SELECT-1	I	L	MODEL SELECT(CD19=LOW)
17	P25	SDA	O	X	DATA BUS DATA
18	P24	SCL	O	X	DATA BUS CLOCK
19	P23	SILD	I/O	X	DATA R/W CONTROL SERVO
20	P22	RAB	I/O	X	DATA R/W CONTROL DECORDER
21	P21	SLSW	I	H	SLEGE SW L=IN END
22	P20	AMUT	O	H	AUDIO MUTE L=MUTED
23	P15	RC5I	I	H	RC-5 DATA INPUT
24	P14	OPEN	-	-	——
25	P13	OPEN	-	-	——
26	P12	RC-5 OUT	O	H	RC-5 DATA OUTPUT
27	P11	MLE	O	X	SM5872BS LACH SIGNAL
28	P10	RST	O	H	SM5872BS RESET(RESET=LOW)
29	P07	RESET	I	H	CPU RESET(RESET=LOW)
30	P05	TMOT	O	M	TRAY MOTOR CONTROL SIGNAL
31	P04	TRIN	I	L	TRAY IN DETECTER SW
32	P03	TROU	I	H	TRAY OUT DETECTER SW
33	P02	OPEN	-	-	——
34	P01	OPEN	-	-	——
35	P00	OPEN	-	-	——
36	SYNC	NC	-	-	NOT USED
37	CM	GND	-	L	GND
38	P47	KEY8	I	X	KEY INPUT KEY8
39	P46	KEY7	I	X	KEY INPUT KEY7
40	P45	KEY6	I	X	KEY INPUT KEY6
41	P44	KEY5	I	X	KEY INPUT KEY5
42	P43	KEY4	I	X	KEY INPUT KEY4
43	P42	KEY3	I	X	KEY INPUT KEY3
44	P41	KEY2	I	X	KEY INPUT KEY2
45	P40	KEY1	I	X	KEY INPUT KEY1
46	P87	DGT0	O	X	FL DIGIT DATA,G9
47	P86	DGT1	O	X	FL DIGIT DATA,G8
48	P85	DGT2	O	X	FL DIGIT DATA,G7
49	P84	DGT3	O	X	FL DIGIT DATA,G6
50	P83	DGT4	O	X	FL DIGIT DATA,G5
51	P82	DGT5	O	X	FL DIGIT DATA,G4
52	P81	DGT6	O	X	FL DIGIT DATA,G3
53	P80	DGT7	O	X	FL DIGIT DATA,G2
54	P71	DGT8	O	X	FL DIGIT DATA,G1
55	P70	SELECT-2	I	H	MODEL SELECT(CD19=H)
56	P67	OPEN	-	-	——
57	P66	OPEN	-	-	——
58	P65	SEG13	O	X	FL SEGMENT DATA,P1
59	P64	SEG12	O	X	FL SEGMENT DATA,P2
60	P63	SEG11	O	X	FL SEGMENT DATA,P3
61	P62	SEG10	O	X	FL SEGMENT DATA,P4
62	P61	SEG09	O	X	FL SEGMENT DATA,P5
63	P60	SEG08	O	X	FL SEGMENT DATA,P6
64	P57	SEG07	O	X	FL SEGMENT DATA,P7

7. PARTS LOCATIONS

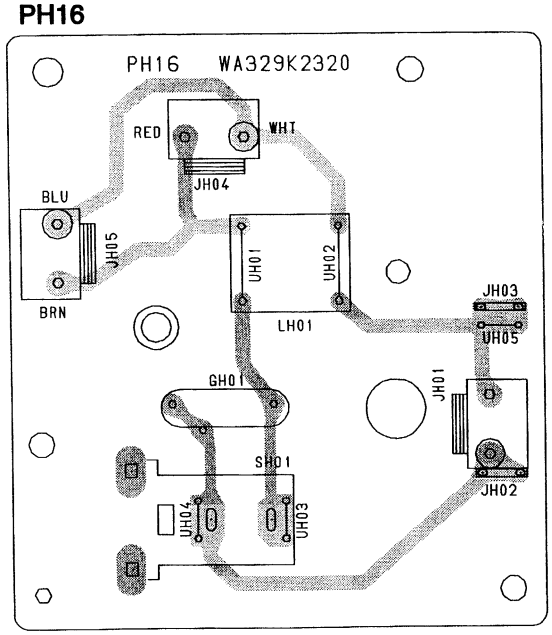
PY16



PH26



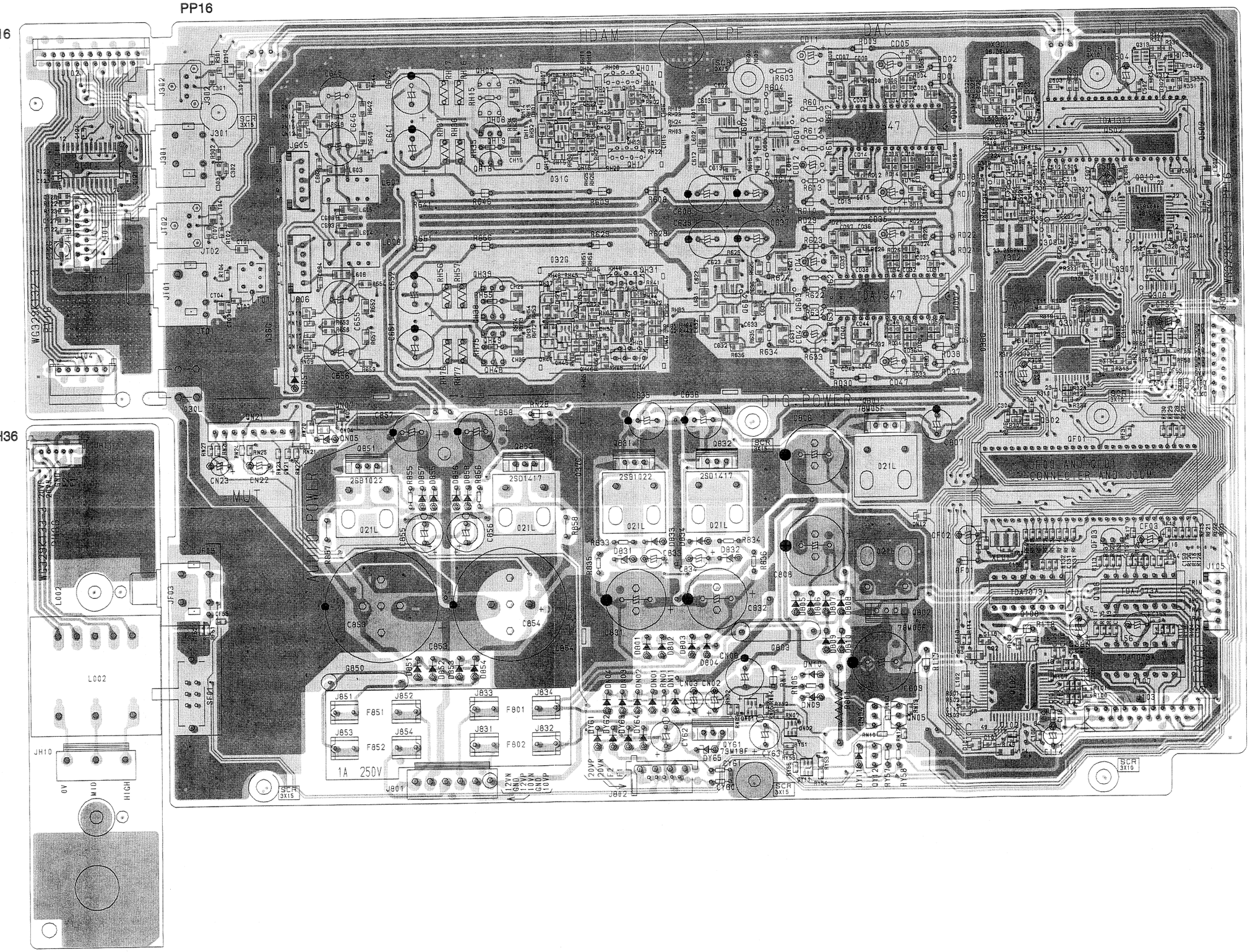
PH16



Q101 Q317 QN21 QN07 Q851 QH81,QH09,QH18,QH19 QH38,QH39,QH48,QH49 QH05~QH07,QH01,QH03,QH15~QH17 QH35~QH37,QH31,QH33,QH45~QH47,QH41,QH43 Q831 Q832 QY61 Q602 Q604 QN01 Q601 Q603 QN02 QD01 QD02 Q801 QD04,QN05,Q802,QY12 Q303,Q305,Q306 Q102,Q108 Q502 Q309,Q301 Q302 Q312 Q307,Q308,Q310,QF51,QF53,Q314, QF01,QF03 Q106,Q107

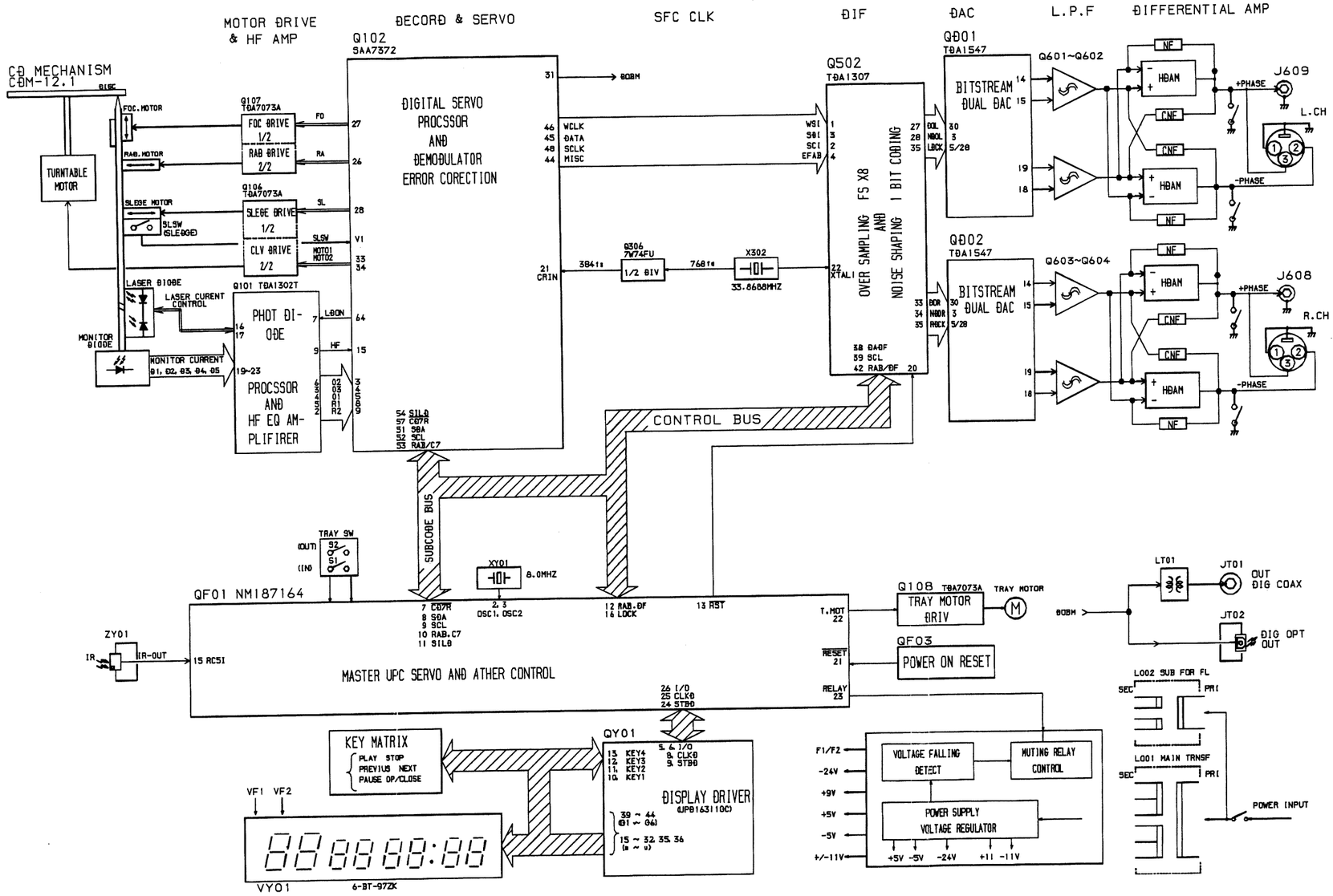
PP16

PV16



PH36

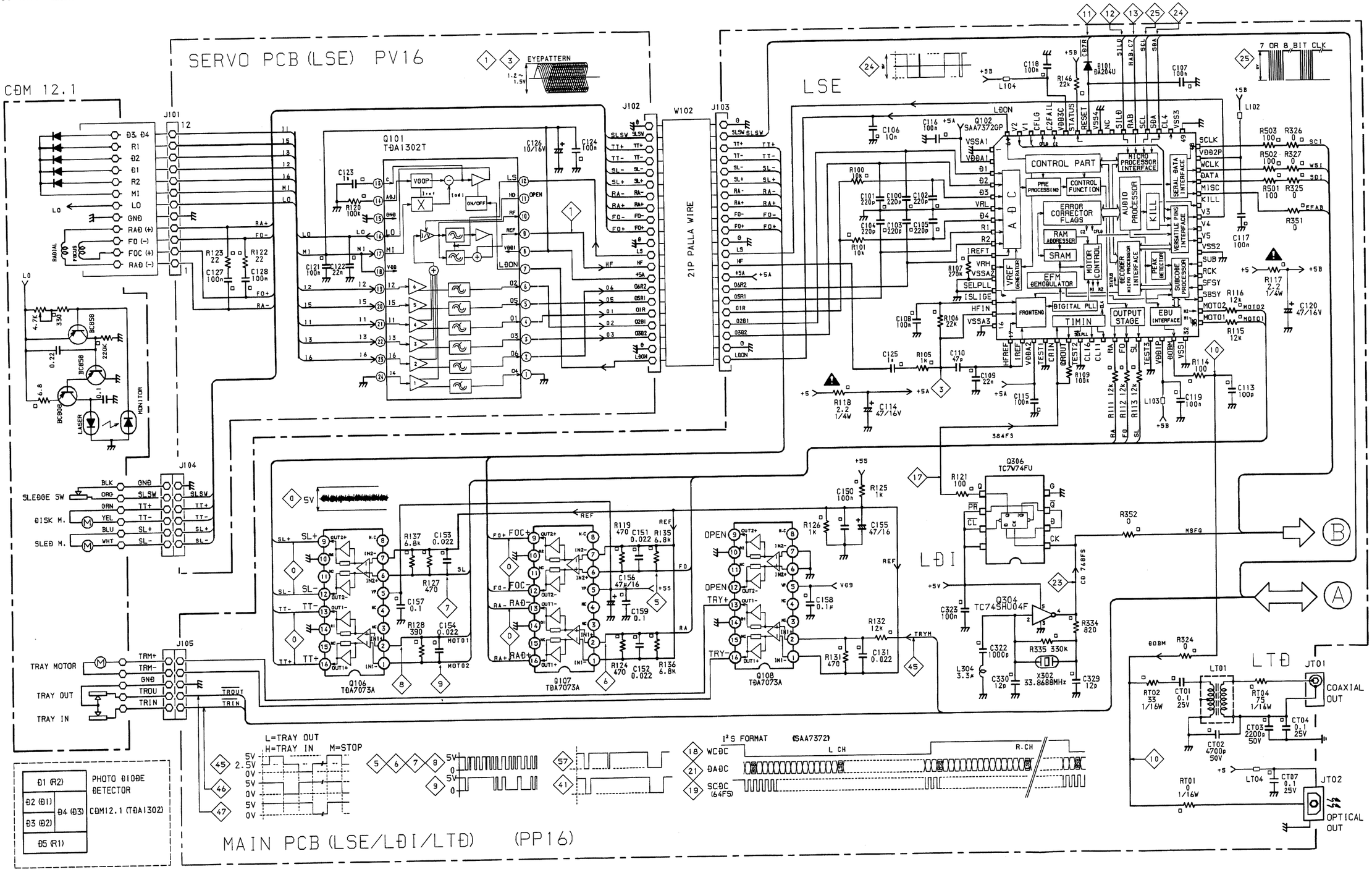
8.BLOCK DIAGRAM



9. FLAG.NO

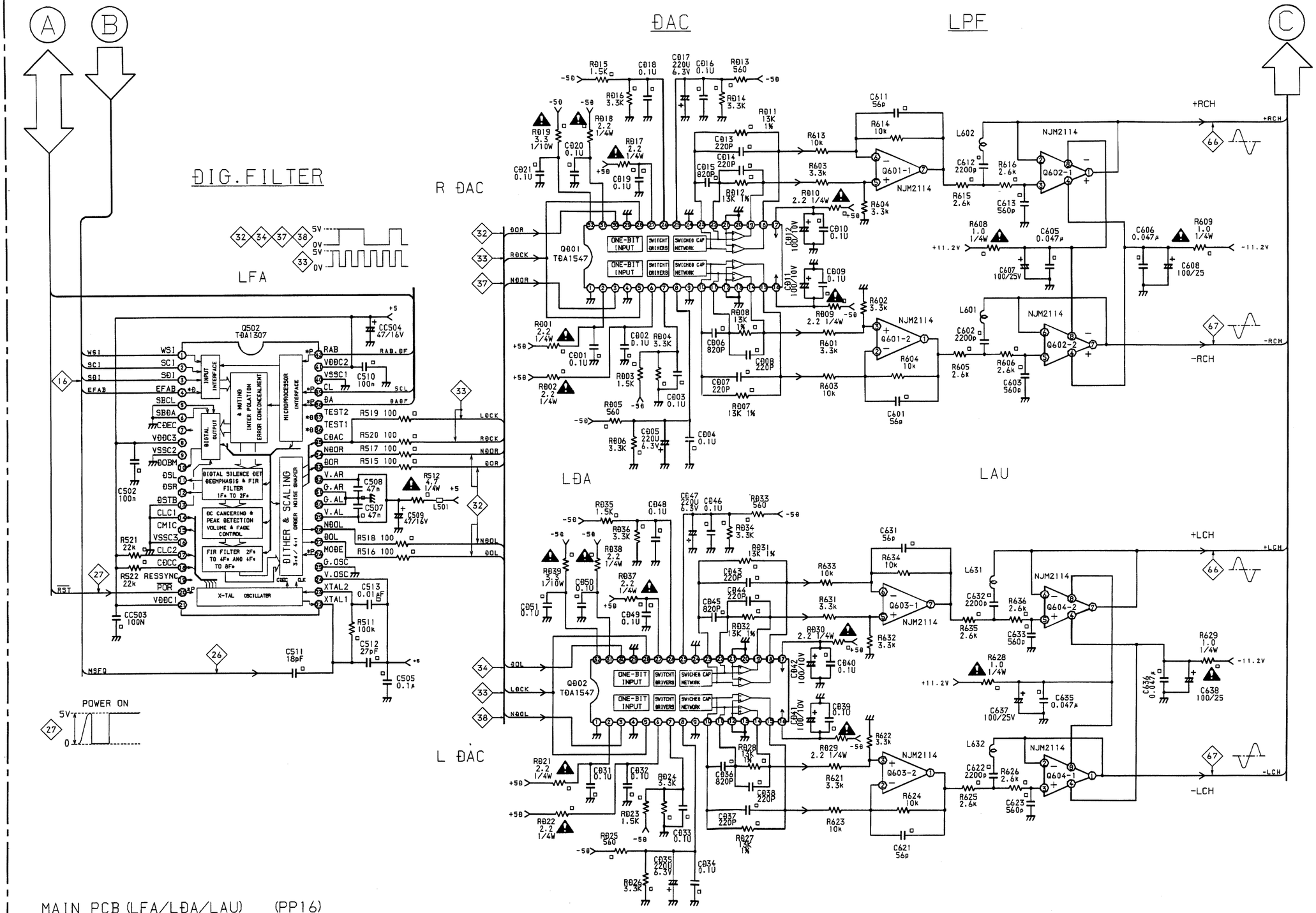
NO.	ITEM	FUNCTION
0	MT-OUT	MOTOR DRIVE OUTPUT
1	HF-OUT	TDA1302T HF (EFM) SIGNAL OUT
2	LDON	LASER ON/OFF CONTROL SIGNAL (L=OFF, H=ON)
3	HF HPF	HF SIGNAL HPF OUT
4	$\overline{RST}$	POWER ON RESET SIGNAL (L=RESET)
5	RA	RADIAL MOTOR CONTROL PULSE (PDM)
6	FO	FOCUS MOTOR CONTROL PULSE (PDM)
7	SL	SLEDGE MOTOR CONTROL PULSE (PDM)
8	MOTO1	TURNTABLE CONTROL PULSE (PDM)
9	MOTO2	TURNTABLE CONTROL PULSE (PDM)
10	DOBM	SPDIF OUTPUT OF CD PART DECORDE
11	$\overline{C07R}$	C07 RESET PULSE
12	SILD	DATA BUS R/W AND LORD CONTROL SERVO
13	RAB.C7	DATA BUS R/W AND LORD CONTROL DECODER
14	SCLK. SCI	AUDIO SERIAL DATA CLOCK
15	WCLK. WSI	AUDIO WORD CLOCK
16	DATA. SDI	AUDIO I²S DATA
17	CL16	SYSTEM CLOCK 16.9344MHZ
18		
19		
20	DATO/DIN	INV SERIAL DATO DATA
21		
22		
23	XI	SYSTEM CLK (33.8688MHz)
24	SDA	MICROCOMPUTER I/O DATA SIGNAL FOR C07/TDA1307
25	SCL	MICROCOMPUTER I/O CLOCK FOR C07/TDA1307
26	MSFQ	MASTER FREQUENCY CLK FOR TDA1307
27	$\overline{RST}$	RESET-L FOR TDA1307
28		
29		
30		
31	DADF	TDA1307 CONTROL DATA
32	DOR	OUTPUT DATA RCH (POSITIVE) OF TDA1307
33	LRCK. RBCK	1 BIT DATA CLOCK OUT
34	DOL	OUTPUT DATA LCH (POSITIVE) OF TDA1307
35	OSC2	UPC IN CLK (8.0MHz)
36	OSC1	UPC OUT CLK (8.0MHz)
37	NDOR	OUTPUT DATA RCH (NEGATIVE) OF TDA1307
38	NDOL	OUTPUT DATA LCH (NEGATIVE) OF TDA1307
39	SLSW	SLEDGE HOME POSITION DETECT SW L:IN END (L=DETECING)
40	A.MUTE	AUDIO MUTE H:MUTE
41	LOCK	DELAYED UNLOCK SIGNAL L:UNLOCK H:LOCK
42		
43		
44		
45	T.MOT	TRAY IN/OUT CONTROL SIGNAL (H=IN L=OUT)
46	$\overline{TRIN}$	TRAY IN DETECT SW L:IN END (L=DETECTING)
47	$\overline{TROU}$	TRAY OUT DETECT SW L:OUT END (L=DETECTING)
48		
49		
50		
51		
52		
53	SO	SERIAL AUDIO DATA INPUT/OUTPUT: I²S-BUS
54	WS	WORD SELECT INPUT/OUTPUT; I²S-BUS
55	SCK	SERIAL AUDIO CLOCK INPUT/OUTPUT: I²S-BUS
56		
57	UNLOCK	PLL OUT-OF-LOCK (0=NOT LOCKED)
58	FLOS	FL GRID AND SEGMENT DRIVE
59		
60		
61	RC I/O	RC-5 SIGNAL INPUT/OUTPUT
62		
63	RC5I	RC-5 SIGNAL MPU INPUT
64	IR	RC-5 IR RECEIVE SIGNAL OUT
65		
66	LPFO	AUDIO SIGNAL POSITIVE
67	-LPFO	AUDIO SIGNAL NEGATIVE
68		
69	RELAY. REMU	RELAY MUTING CONTROL SIGNAL
70		
71	VF1. VF2	VOLTAGE OF FTD HEATER

10. SCHEMATIC DIAGRAM



NOTE ON SAFETY :

Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠ Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.



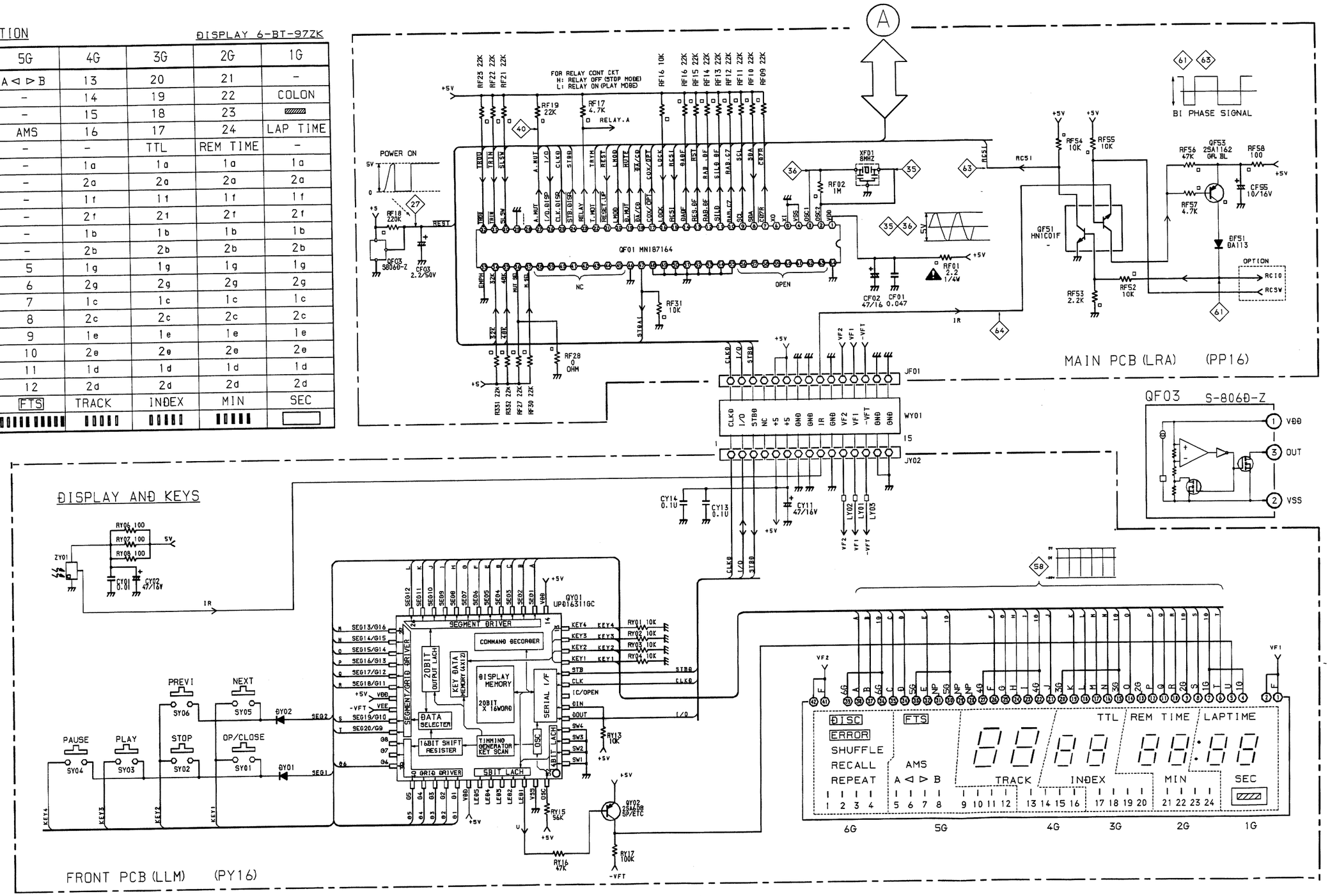
NOTE ON SAFETY :

Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

ANODE CONNECTION

DISPLAY 6-BT-97ZK

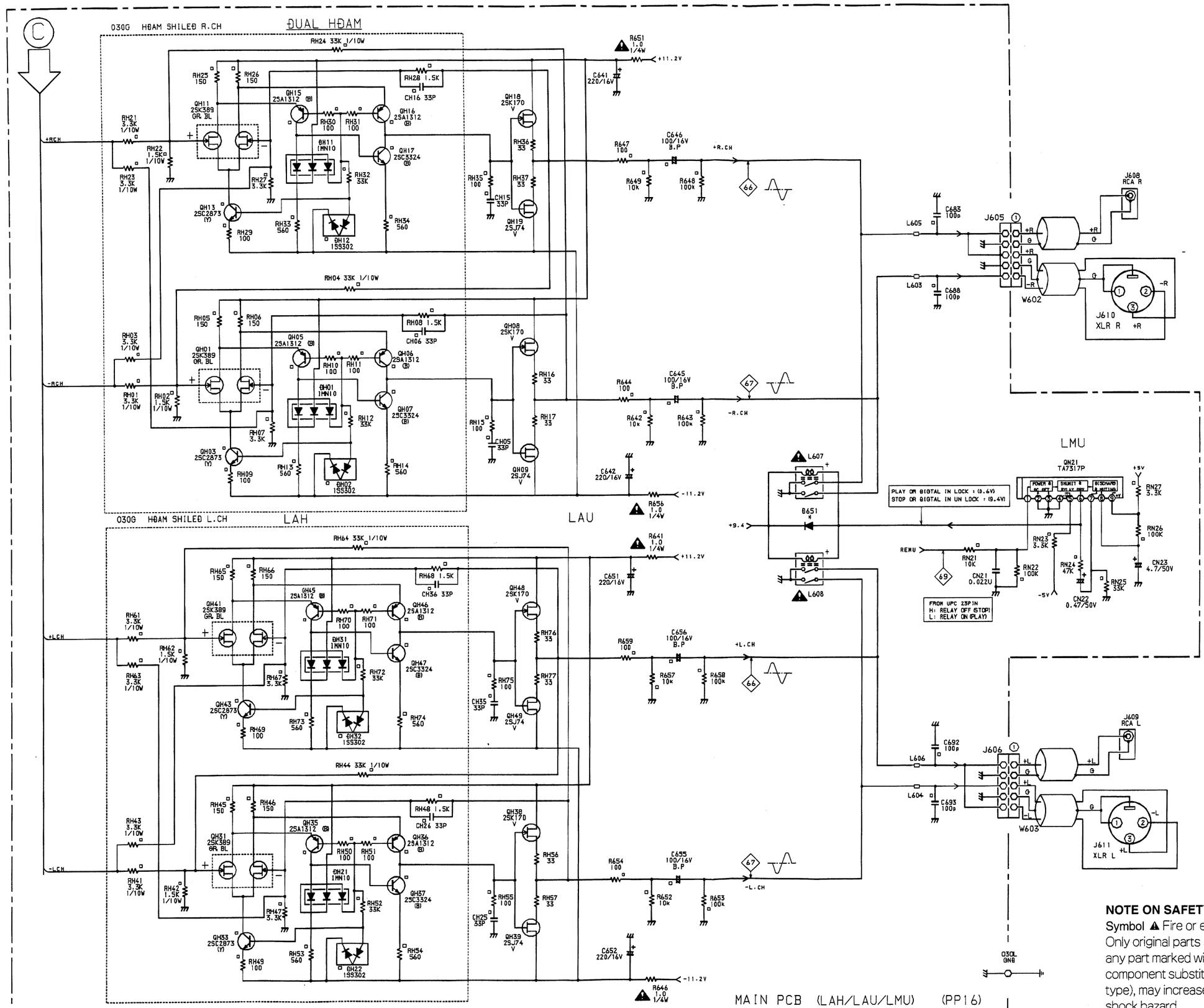
	6G	5G	4G	3G	2G	1G
A	ERROR	A ◁ ▷ B	13	20	21	-
B	SHUFFLE	-	14	19	22	COLON
C	RECALL	-	15	18	23	▨
D	REPEAT	AMS	16	17	24	LAP TIME
E	DISC	-	-	TTL	REM TIME	-
F	-	-	1a	1a	1a	1a
G	-	-	2a	2a	2a	2a
H	-	-	1f	1f	1f	1f
I	-	-	2f	2f	2f	2f
J	-	-	1b	1b	1b	1b
K	-	-	2b	2b	2b	2b
L	4	5	1g	1g	1g	1g
M	3	6	2g	2g	2g	2g
N	2	7	1c	1c	1c	1c
O	1	8	2c	2c	2c	2c
P	-	9	1e	1e	1e	1e
Q	-	10	2e	2e	2e	2e
R	-	11	1d	1d	1d	1d
S	-	12	2d	2d	2d	2d
T	-	FTS	TRACK	INDEX	MIN	SEC
U	▮▮▮▮▮	▮▮▮▮▮▮▮▮▮▮	▮▮▮▮▮	▮▮▮▮▮	▮▮▮▮▮	▭



DISPLAY AND KEYS

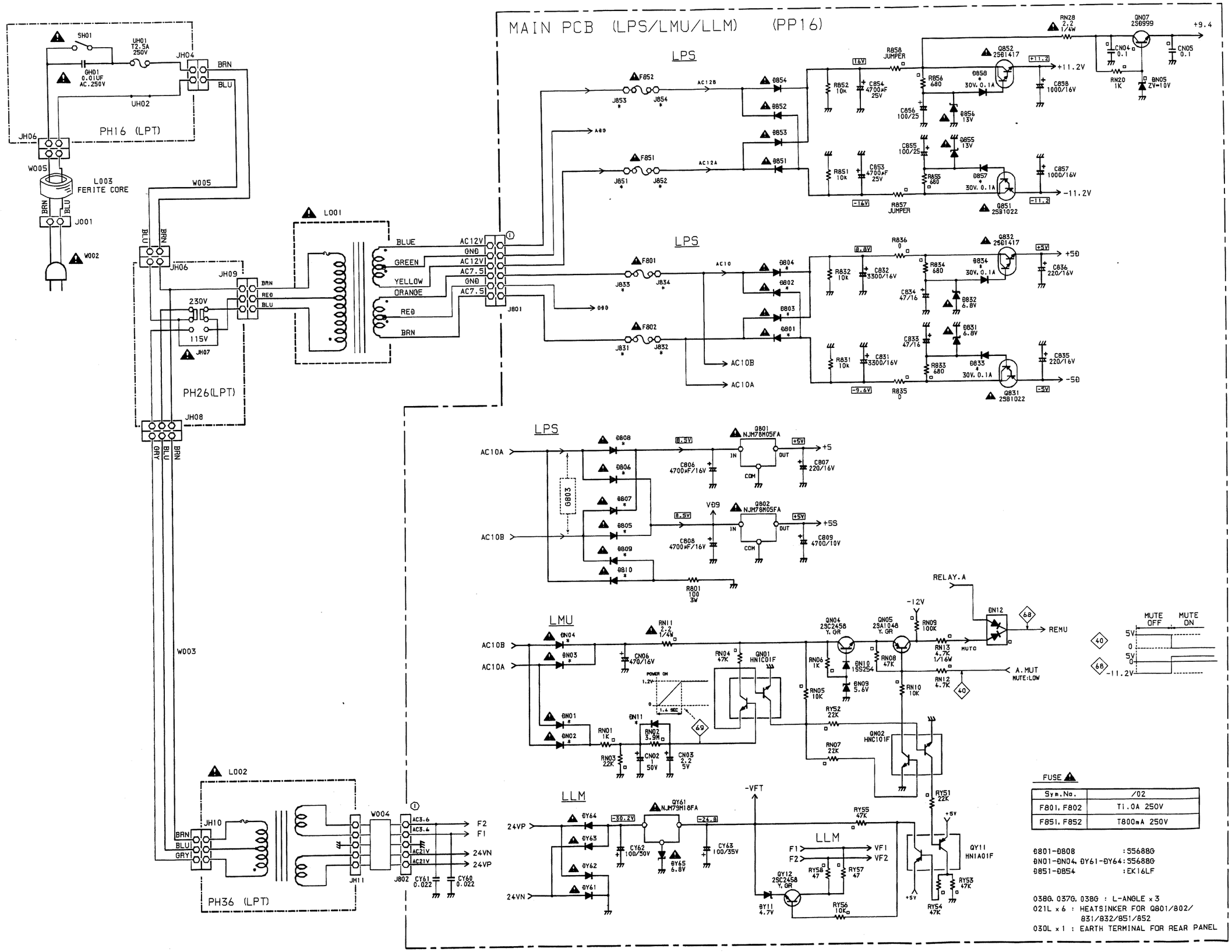
NOTE ON SAFETY :

Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

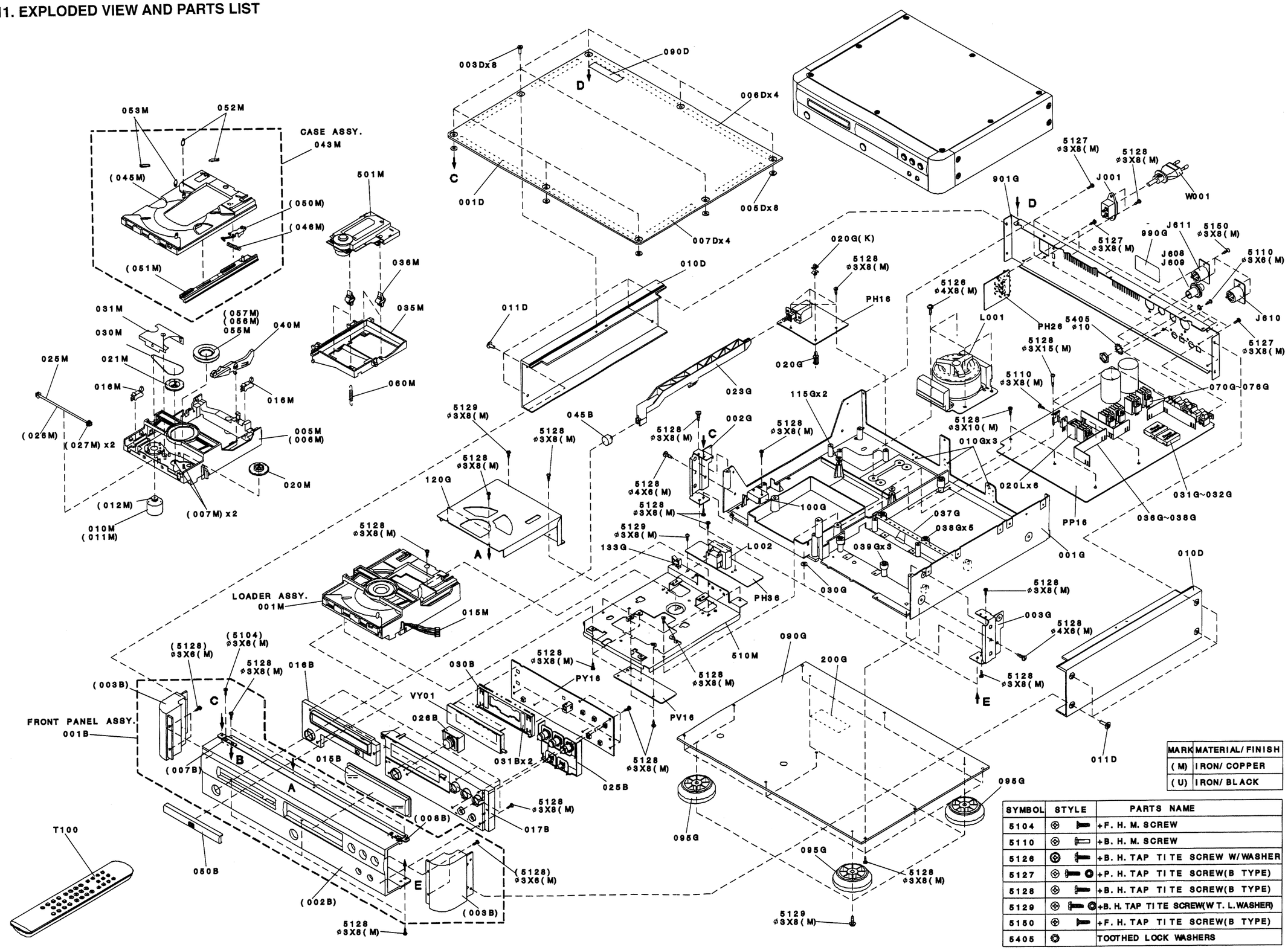


NOTE ON SAFETY :

Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠ . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.


MAIN PCB (LPS/LMU/LLM) (PP16)
PH16 (LPT)
PH26(LPT)
PH36 (LPT)
SH01
UH01 T2.5A 250V
GH01 0.01UF AC.250V
UH02
JH04
JH06
JH07
JH08
JH09
JH10
JH11
W001
W002
W003
W004
W005
L001
L002
L003 FERITE CORE
J001
J801
J802
230V
115V
BRN
BLU
GRY
RED
BLUE
GREEN
YELLOW
ORANGE
AC12V
GND
AC7.5
LPS
LMU
LLM
F851
F852
F801
F802
AC12A
AC12B
AC10
AC10A
AC10B
D80
A80
D804
D802
D803
D801
D808
D806
D807
D805
D809
D810
R801 100 3W
Q801 NJM78M05FA
Q802 NJM78M05FA
QN07 2SD999
Q852 2SB1417
Q851 2SB1022
Q832 2SB1417
Q831 2SB1022
QN04 2SC2458 Y.GR
QN05 2SA1048 Y.GR
QN02 HN1C01F
QN01 HN1C01F
QY11 HN1A01F
QY12 2SC2458 Y.GR
QY61 NJM79M18FA
BY11 4.7V
DN12
DN10 1SS254
DN09 5.6V
DN05 ZV=10V
R858 JUMPER
R857 JUMPER
C854 4700uF 25V
C853 4700uF 25V
C858 1000/16V
C857 1000/16V
C856 100/25
C855 100/25
C836 220/16V
C835 220/16V
C832 3300/16V
C831 3300/16V
C834 47/16
C833 47/16
C806 4700uF/16V
C807 220/16V
C808 4700uF/16V
C809 4700/10V
C801 0.022
C800 0.022
CY62 100/50V
CY63 100/35V
CN06 470/16V
CN02 50V
CN03 2.2 5V
RN28 2.2 1/4W
RN20 1K
RN11 2.2 1/4W
RN13 4.7K 1/16W
RN12 4.7K
RN10 10K
RN09 100K
RN08 47K
RN07 22K
RN06 1K
RN05 10K
RN04 47K
RN03 22K
RN02 3.9M
RN01 1K
RY52 22K
RY51 22K
RY55 47K
RY54 47K
RY53 47K
RY58 47
RY57 47
RY56 10K
R858 JUMPER
R856 680
R855 680
R852 10K
R851 10K
R836 0
R834 680
R833 680
R832 10K
R831 10K
R835 0
+11.2V
-11.2V
+9.4
+5Ø
-5Ø
+5V
-5V
-14V
16V
8.8V
-9.6V
-30.2V
-24.8
8.5V
-VFT
VØ9
+5S
24VP
24VN
F1
F2
VF1
VF2
REMU
A.MUT MUTE:LOW
MUTO
RELAY.A
-12V
MUTE OFF
MUTE ON
POWER ON
1.2V
1.4 SEC
FUSE
Sym.No. /02
F801, F802 T1.0A 250V
F851, F852 T800mA 250V
D801-D808 :S5688G
DN01-DN04, DY61-DY64: S5688G
D851-D854 :EK16LF
038G, 037G, 038G : L-ANGLE x 3
021L x 6 : HEATSINKER FOR Q801/802/831/832/851/852
030L x 1 : EARTH TERMINAL FOR REAR PANEL

11. EXPLODED VIEW AND PARTS LIST



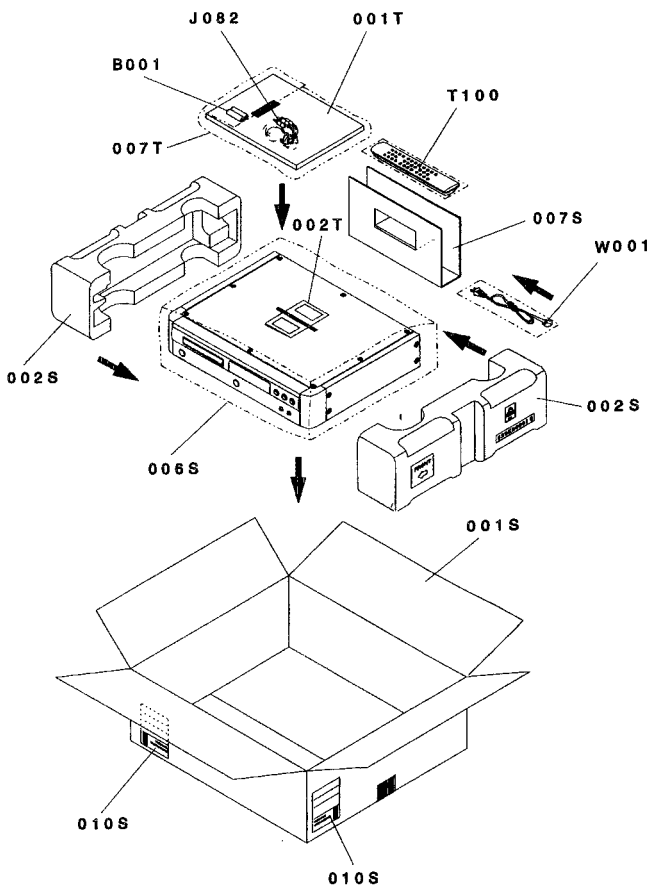
MARK	MATERIAL/ FINISH
(M)	IRON/ COPPER
(U)	IRON/ BLACK

SYMBOL	STYLE	PARTS NAME
5104		+F. H. M. SCREW
5110		+B. H. M. SCREW
5126		+B. H. TAP TITE SCREW W/WASHER
5127		+P. H. TAP TITE SCREW(B TYPE)
5128		+B. H. TAP TITE SCREW(B TYPE)
5129		+B. H. TAP TITE SCREW(WT. L.WASHER)
5150		+F. H. TAP TITE SCREW(B TYPE)
5405		TOOTHED LOCK WASHERS

(VERS. : VERSION, U : U.S.A., F : JAPAN, K : FAR EAST, /XX : EUROPE)

POS. NO.	VERS. COLOR	PART NO. (FOR EUROPE)	DISCRIPTION	PART NO. (MJI)
001B	BLACK	4822 459 04761	FRONT PANEL ASSY BLK	329K248520
001B	GOLD	4822 459 04762	FRONT PANEL ASSY GLD	329K248530
002B	BLACK	4822 459 04763	FRONT PANEL AL BLK	329K248020
002B	GOLD	4822 459 04764	FRONT PANEL AL GLD	329K248120
003B	BLACK	4822 426 10534	ESCUTCHON AL BLK	329K063010
003B	GOLD	4822 426 10535	ESCUTCHON AL GLD	329K063110
015B	BLACK	4822 450 10401	WINDOW BLK	329K158010
015B	GOLD	4822 450 10402	WINDOW GLD	329K158110
016B	BLACK	4822 532 12884	BUSHING BLK	329K259010
016B	GOLD	4822 532 12885	BUSHING GLD	329K259110
017B	BLACK	4822 256 10405	RETAINER BLK	329K104010
017B	GOLD	4822 256 10406	RETAINER GLD	329K104110
025B	BLACK	4822 410 11438	BUTTON BLK	329K270010
025B	GOLD	4822 410 11439	BUTTON GLD	329K270110
026B	BLACK	4822 410 11441	BUTTON, OPEN CLOSE BLK	329K270020
026B	GOLD	4822 410 11442	BUTTON, OPEN CLOSE GLD	329K270120
030B		4822 256 92037	F.T.D. HOLDER	225K271010
031B			STICKER, ADHESIVE	056J122050
045B	BLACK	4822 410 70026	BUTTON, POWER BLK	318K270010
045B	GOLD	4822 410 70031	BUTTON, POWER GLD	318K270110
050B	BLACK	4822 442 01107	ESCUTCHEON,TRAY LID BLK	329K063030
050B	GOLD	4822 442 01108	ESCUTCHEON,TRAY LID GLD	329K063130
001D	BLACK	4822 442 01109	LID, TOP COVER BLK	329K257010
001D	GOLD	4822 442 01111	LID, TOP COVER GLD	329K257110
003D		4822 502 14461	SCREW M3 x 5 BL	318K010030
003D		4822 502 14462	SCREW M3 x 5 NI	318K010020
005D			TOP COVER SPACER	318K118010
010D	BLACK	4822 426 10536	SIDE PANEL, BLK	329K249010
010D	GOLD	4822 426 10537	SIDE PANEL, GLD	329K249110
011D		4822 502 14461	SCREW M3 x 5 BL	318K010030
011D		4822 502 14462	SCREW M3 x 5 NI	318K010020
023G		4822 402 10871	LINK, POWER SW.	329K121010
095G		4822 462 42134	LEG	291K057010
200G		4822 600 70229	LABEL	2911861110
001M	BLACK	4822 691 10639	MECHANISM LOADER LM-300	305K304540
001M	GOLD	4822 691 10641	MECHANISM LOADER LM-300	305K304550
005M		4822 464 10054	FRAME K	305K401500
010M		4822 361 21741	D.C.MOTOR K	MM0030002R
016M		4822 271 30873	SWITCH, MINI	SM01020620
020M		4822 522 33521	GEAR	305K058030
021M		4822 528 81537	PULLEY	305K262010
025M		4822 522 33522	GEAR K	305K058500
030M		4822 358 31314	BELT	305K264010
031M		4822 459 50976	MASK	305K303010
035M		4822 443 51265	CASE	305K064110
036M		4822 462 72118	BUFFER SUSPENSION	305K056010
040M		4822 402 20104	ARM	305K002010
043M	BLACK		CASE K BLK	329K064500
043M	GOLD		CASE K BRN	329K064510
046M		4822 492 33494	SPRING	305K115010
050M		4822 528 30429	CAM	305K054010
051M		4822 522 33519	GEAR	305K058010
055M		4822 401 11582	CLAMPER K	305K005500
060M		4822 492 33495	SPRING	305K115020
501M		4822 691 30278	MECHANISM CDM12	292K304500

POS. NO.	VERS. COLOR	PART NO. (FOR EUROPE)	DISCRIPTION	PART NO. (MJI)
⚠J001			JACK 2P AC INLET	YJ04002360
J608		4822 290 61214	TERMINAL 1P RCA R	YT02010820
J609		4822 290 61214	TERMINAL 1P RCA L	YT02010820
J610		4822 267 31466	PLUG CANON R	YP10003190
J611		4822 267 31466	PLUG CANON L	YP10003190
⚠L001		4822 146 10889	MAINS TRANSF. 115V 230V	TS46009030
L003		4822 526 10696	FERRITE CORE	FC50150010
			PACKING	
001T		4822 736 15704	USER MANUAL	329K851310
J081		4822 321 22611	CONNECTIVE CORD PCA	ZD01100010
T100		4822 219 10373	IR COMANDER RC-D16CD	ZK329K0010
⚠W001			MAINS CORD	ZC01803080



12. ELECTRICAL PARTS LIST

ASSIGNMENT OF COMMON PARTS CODES.

RESISTORS

R＊＊＊ : 1) GD05 x x x 140, Carbon film fixed resistor, ±5% 1/4W
R＊＊＊ : 2) GD05 x x x 160, Carbon film fixed resistor, ±5% 1/6W
① Resistance value

Examples ;
① Resistance value

0.1 Ω 001	10 Ω 100	1k Ω .. 102	100k Ω 104
0.5 Ω 005	18 Ω 180	2.7k Ω .. 272	680k Ω 684
1 Ω 010	100 Ω 101	10k Ω .. 103	1M Ω 105
6.8 Ω 068	390 Ω 391	22k Ω .. 223	4.7M Ω 475

Note : Please distinguish 1/4W from 1/6W by the shape of parts used actually.

CAPACITORS

C＊＊＊ : CERAMIC CAP.
3) DD1 x x x x 370, Ceramic capacitor
Disc type
Temp.coeff. P350~N1000, 50V
③ Capacity value
② Tolerance

Examples
② Tolerance (Capacity deviation)
± 0.25 pF 0
± 0.5 pF 1
± 5 % 5
＊ Tolerance of COMMON PARTS handled here are as follows :
0.5 pF - 5 pF ..... ± 0,25 pF
6 pF - 10 pF ..... ± 0.5 pF
12 pF - 560 pF ... ± 5 %

③ Capacity value

0.5 pF 005	3 pF 030	100 pF 101
1 pF 010	10 pF 100	220 pF 221
1.5 pF 015	47 pF 470	560 pF 561

C＊＊＊ : CERAMIC CAP.
4) DK16 x x x 300, High dielectric constant ceramic capacitor
Disc type
Temp.chara. 2B4, 50V
④ Capacity value

Examples
④ Capacity value

100 pF 101	1000 pF 102	10000 pF 103
470 pF 471	2200 pF 222	

C＊＊＊ : 5) ELECTROLY CAP.(⧻), 6)FILM CAP (⫟)
5) EA x x x x x x 10, Electrolytic capacitor
One-way lead type,Tolerance ±20%
⑥ Working voltage
⑤ Capacity value

Examples
⑤ Capacity value

0.1μ F 104	4.7μ F 475	100μ F 107
0.33μ F 334	10μ F 106	330μ F 337
1μ F 105	22μ F 226	1100μ F 118
		2200μ F 228

⑥ Working voltage

6.3 V. . .006	25 V. . .025
10 V. . .010	35 V. . .035
16 V. . .016	50 V. . .050

6) DF15 x x x 350 → Plastic film capacitor
DF15 x x x 310 → One-way type, Mylar ±5% 50V
DF16 x x x 310 → Plastic film capacitor
One-way type, Mylar ±10% 50V
⑦ Capacity value

Examples
⑦ Capacity value

0.001μF (1000pF) 102	0.1μF 104
0.0018μF 182	0.56μF 564
0.01μF 103	1μF 105
0.015μF 153	

NOTE :1) The above CODES(R＊＊＊,R＊＊＊,C＊＊＊,C＊＊＊ and C＊＊＊) are omitted on the schematic diagram in some case.
2) On the occasion, be confirmed the common parts on the parts list.
3) Refer to "Common Parts List" for the other common parts(**RI05, DD4, DK4**).

NOTE ON SAFETY FOR FUSIBLE RESISTOR :

The suppliers and their type numbers of fusible resistors are as follows ;
1 . KOA Corporation

Part No.(MJI)	Type No.(KOA)	Description
NH05 x x x 140	→ RF25S x x x x Ω J	(±5% 1/4W)
NH05 x x x 120	→ RF50S x x x x Ω J	(±5% 1/2W)
NH85 x x x 110	→ RF73B2A x x x x Ω J	(±5% 1/10W)
NH95 x x x 140	→ RF73B2E x x x x Ω J	(±5% 1/4W)

＊ Resistance value　　Resistance value(0.1 Ω- 10k Ω)

2. Matsushita Electronic Components Co., Ltd

Part No.(MJI)	Type No.(MEC)	Description
NF05 x x x 140	→ ERD-2FCJ x x x	(±5% 1/4W)
RF05 x x x 140		
NF02 x x x 140	→ ERD-2FCG x x x	(±2% 1/4W)
RF02 x x x 140		

＊ Resistance value

Examples :
＊ Resistance value

0.1 Ω 001	10 Ω 100	1k Ω .. 102	100k Ω 104
0.5 Ω 005	18 Ω 180	2.7k Ω .. 272	680k Ω 684
1 Ω 010	100 Ω 101	10k Ω .. 103	1M Ω 105
6.8 Ω 068	390 Ω 391	22k Ω .. 223	4.7M Ω 475

ABBREVIATION AND MARKS			
ANT.	: ANTENNA	BATT.	: BATTERY
CAP.	: CAPACITOR	CER.	: CERAMIC
CONN.	: CONNECTING	DIG.	: DIGITAL
HP	: HEADPHONE	MIC.	: MICROPHONE
μ -PRO	: MICROPROCESSOR	REC.	: RECORDING
RES.	: RESISTOR	SPK	: SPEAKER
SW	: SWITCH	TRANSF.	: TRANSFORMER
TRIM.	: TRIMMING	TRS.	: TRANSISTOR
VAR.	: VARIABLE	X 'TAL	: CRYSTAL

NOTE ON SAFETY:

Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replaced any part marked with symbol ⚠ Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

安全上の注意 :

⚠ がついている部品は、安全上重要な部品です。必ず指定されている部品番号の部品を使用して下さい。

(VERS. : VERSION, U : U.S.A., F : JAPAN, K : FAR EAST, /XX : EUROPE)

POS. NO.	VERS. COLOR	PART NO. (FOR EUROPE)	DISCRIPTION	PART NO. (MJI)
			PH16-POWER SW CIRCUIT BOARD	
⚠GH01		4822 121 43732	FILM CAP. 0.01µF 20% 250V	DF77103500
⚠SH01		4822 276 13364	POWER SW	SP01011990
⚠UH01		4822 252 11189	FUSE T2.5A 250V	FS20250200
			PH26-VOLTAGE SELECTOR CIRCUIT BOARD	
⚠JH07		4822 277 21825	SLIDE SW SELECTOR	SS02021510
			PH36-SUB TRANS CIRCUIT BOARD	
⚠L002		4822 146 10891	FL TRANSF. 115V 230V	TS13517060
			PP16-MAIN/SERVO/DAC/ AUDIO CIRCUIT BOARD	
			PP16-CAPACITORS	
CD01 ∫ CD04		4822 126 12061	CER. 0.1µF ±10% 25V CHIP	DK56104200
CD05		4822 124 41537	ELECT 220 µF 6.3V	OA22700620
CD06		4822 123 30363	MICA 820pF ±5% CHIP	DF95821510
CD07		4822 123 30359	MICA 220pF±5%100WV CHIP	DF95221510
CD08		4822 123 30359	MICA 220pF±5% 100WV CHIP	DF95221510
CD09		4822 126 12061	CER. 0.1µF ±10% 25V CHIP	DK56104200
CD10		4822 126 12061	CER. 0.1µF ±10% 25V CHIP	DK56104200
CD11		4822 124 90353	ELECT 100 µF 10V	OA10701020
CD12		4822 124 90353	ELECT 100 µF 10V	OA10701020
CD13		4822 123 30359	MICA 220pF ±5% 100WVCHIP	DF95221510
CD14		4822 123 30359	MICA 220pF ±5% 100WVCHIP	DF95221510
CD15		4822 123 30363	MICA 820pF ±5% CHIP	DF95821510
CD16		4822 126 12061	CER. 0.1µF ±10% 25V CHIP	DK56104200
CD17		4822 124 41537	ELECT 220 µF 6.3V	OA22700620
CD18 ∫ CD21		4822 126 12061	CER. 0.1µF ±10% 25V CHIP	DK56104200
CD31 ∫ CD34		4822 126 12061	CER. 0.1µF ±10% 25V CHIP	DK56104200
CD35		4822 124 41537	ELECT 220 µF 6.3V	OA22700620
CD36		4822 123 30363	MICA 820pF ±5% CHIP	DF95821510
CD37		4822 123 30359	MICA 220pF ±5%100WV CHIP	DF95221510
CD38		4822 123 30359	MICA 220pF ±5%100WV CHIP	DF95221510
CD39		4822 126 12061	CER. 0.1µF ±10% 25V CHIP	DK56104200
CD40		4822 126 12061	CER. 0.1µF ±10% 25V CHIP	DK56104200
CD41		4822 124 90353	ELECT 100 µF 10V	OA10701020
CD42		4822 124 90353	ELECT 100 µF 10V	OA10701020
CD43		4822 123 30359	MICA 220pF ±5% 100WVCHIP	DF95221510
CD44		4822 123 30359	MICA 220pF ±5% 100WVCHIP	DF95221510
CD45		4822 123 30363	MICA 820pF ±5% CHIP	DF95821510
CD46		4822 126 12061	CER. 0.1µF ±10% 25V CHIP	DK56104200
CD47		4822 124 41537	ELECT 220µF 6.3V	OA22700620

POS. NO.	VERS. COLOR	PART NO. (FOR EUROPE)	DISCRIPTION	PART NO. (MJI)
CD48 ∫ CD51		4822 126 12061	CER. 0.1µF ±10% 25VCHIP	DK56104200
CF01		4822 122 32669	CER. 0.047µF+80% -20%CHIP	DK58473300
CF02		4822 124 41539	ELECT 47µF 16V	OA47601620
CF03		4822 124 90357	ELECT 2.2µF 50V	OA22505020
CF05		4822 124 41539	ELECT 47µF 16V	OA47601620
CH05		4822 123 30422	MICA 33pF ±5% 500WV CHIP	DF95330500
CH06		4822 123 30422	MICA 33pF ±5% 500WV CHIP	DF95330500
CH15		4822 123 30422	MICA 33pF ±5% 500WV CHIP	DF95330500
CH16		4822 123 30422	MICA 33pF ±5% 500WV CHIP	DF95330500
CH25		4822 123 30422	MICA 33pF ±5% 500WV CHIP	DF95330500
CH35		4822 123 30422	MICA 33pF ±5% 500WV CHIP	DF95330500
CH36		4822 123 30422	MICA 33pF ±5% 500WV CHIP	DF95330500
CH46		4822 123 30422	MICA 33pF ±5% 500WV CHIP	DF95330500
CN02		4822 124 41543	ELECT 1µF 50V	OA10505020
CN03		4822 124 90357	ELECT 2.2µF 50V	OA22505020
CN04		4822 126 12061	CER. 0.1µF ±10% 25V CHIP	DK56104200
CN05		4822 126 12061	CER. 0.1µF ±10% 25V CHIP	DK56104200
CN06		4822 124 22277	ELECT 470µF 16V	OA47701620
CN21		4822 126 11567	CER. 0.022µF ±10% CHIP	DK96223200
CN22		4822 124 22273	ELECT 0.47µF 50V	OA47405020
CN23		4822 124 22274	ELECT 4.7µF 50V	OA47505020
CT01		4822 126 12061	CER. 0.1µF ±10% 25V CHIP	DK56104200
CT02		4822 126 11685	CER. 4700pF ±10% 50V CHIP	DK96472300
CT03		4822 126 11566	CER. 2200pF ±10% 50V CHIP	DK96222300
CT04		4822 126 12061	CER. 0.1µF ±10% 25V CHIP	DK56104200
CT07		4822 126 12061	CER. 0.1µF ±10% 25V CHIP	DK56104200
CY60		4822 122 40588	CER. 0.022µF ±20% 50V	DA17223110
CY61		4822 122 40588	CER. 0.022µF ±20% 50V	DA17223110
CY62		4822 124 90355	ELECT 100µF 50V	OA10705020
CY63		4822 124 90355	ELECT 100µF 50V	OA10705020
C100 ∫ C105		4822 126 11682	CER. 220pF ±10% 50V CHIP	DK96221300
C106		4822 126 11567	CER. 0.022µF ±10% 16V CHIP	DK96223200
C107		4822 126 12061	CER. 0.1µF ±10% 25V CHIP	DK56104200
C108		4822 126 12061	CER. 0.1µF ±10% 25V CHIP	DK56104200
C109		4822 126 11567	CER. 0.022µF ±10% 16V CHIP	DK96223200
C110		4822 122 33777	CER. 47pF ±5% 50V CHIP	DD95470300
C113		4822 122 33744	CER. 100pF ±5% 50V CHIP	DD95101300
C114		4822 124 41539	ELECT 47µF 16V	OA47601620
C115 ∫ C118		4822 126 11687	CER. 0.1µF+80% -20% CHIP	DK98104200
C119		4822 126 12061	CER.0.1µF ±10% 25V CHIP	DK56104200
C121		4822 126 11687	CER. 0.1µF +80% -20% CHIP	DK98104200
C122		4822 126 11704	CER. 0.022µF+80% -20%CHIP	DK98223300
C123		5322 126 11578	CER. 1000pF ±10% 50V CHIP	DK96102300
C124		4822 126 11687	CER. 0.1µF +80% -20% CHIP	DK98104200
C125		5322 126 11578	CER. 1000pF ±10% 50V CHIP	DK96102300
C126		4822 124 11074	ELECT. 10µF 16V CHIP	EY10601620
C127		4822 126 12061	CER. 0.1µF ±10% 25V CHIP	DK56104200
C128		4822 126 12061	CER. 0.1µF ±10% 25V CHIP	DK56104200
C131		4822 126 11567	CER. 0.022µF ±10% 16V CHIP	DK96223200
C150		4822 126 11687	CER. 0.1µF +80% -20% CHIP	DK98104200
C151 ∫ C154		4822 126 11567	CER. 0.022µF ±10% 16V CHIP	DK96223200
C155		4822 124 41539	ELECT 47µF 16V	OA47601620
C156		4822 124 90354	ELECT 100µF 16V	OA10701620

(VERS. : VERSION, U : U.S.A., F : JAPAN, K : FAR EAST, /XX : EUROPE)

POS. NO.	VERS. COLOR	PART NO. (FOR EUROPE)	DISCRIPTION	PART NO. (MJI)
C157		4822 126 11687	CER. 0.1µF +80% -20% CHIP	DK98104200
C158		4822 126 11687	CER. 0.1µF +80% -20% CHIP	DK98104200
C159		4822 126 11687	CER. 0.1µF +80% -20% CHIP	DK98104200
C322		5322 126 11578	CER. 1000pF ±10% 50V CHIP	DK96102300
C324		4822 126 11687	CER. 0.1µF +80% -20% CHIP	DK98104200
C325		4822 126 11687	CER. 0.1µF +80% -20% CHIP	DK98104200
C325		4822 126 11687	CER. 0.1µF +80% -20% CHIP	DK98104200
C329		4822 126 11663	CER. 12pF ±5% 50V CHIP	DD95120300
C330		4822 126 11663	CER. 12pF ±5% 50V CHIP	DD95120300
C502		4822 126 11687	CER. 0.1µF +80% -20% CHIP	DK98104200
C503		4822 126 11687	CER. 0.1µF +80% -20% CHIP	DK98104200
C504		4822 124 41539	ELECT 47 µF 16V	OA47601620
C505		4822 126 11687	CER. 0.1µF +80% -20% CHIP	DK98104200
C507		4822 126 11687	CER. 0.1µF +80% -20% CHIP	DK98104200
C508		4822 126 11687	CER. 0.1µF +80% -20% CHIP	DK98104200
C509		4822 124 41539	ELECT 47 µF 16V	OA47601620
C510		4822 126 11687	CER. 0.1µF +80% -20% CHIP	DK98104200
C511		4822 122 33757	CER. 18pF ±5% 50V CHIP	DD95180300
C512		4822 126 11669	CER. 27pF ±5% 50V CHIP	DD95270300
C513			CER. 0.01µF ±10% CHIP	DK96103300
C601		4822 123 30361	MICA 56pF ±5% 500WV CHIP	DF95560500
C602		4822 123 30387	MICA 2200pF ±5% CHIP	DF95222030
C603		4822 123 30362	MICA 560PF ±5% CHIP	DF95561510
C605		4822 122 32669	CER. 0.047µF +80% -20% CHIP	DK58473300
C606		4822 122 32669	CER. 0.047µF +80% -20% CHIP	DK58473300
C607		4822 124 22039	ELECT 220µF 16V	OA22701650
C608		4822 124 22039	ELECT 220µF 16V	OA22701650
C611		4822 123 30361	MICA 56pF ±5% 500WV CHIP	DF95560500
C612		4822 123 30387	MICA 2200pF ±5% CHIP	DF95222030
C613		4822 123 30362	MICA 560pF ±5% CHIP	DF95561510
C621		4822 123 30361	MICA 56pF ±5% 500WV CHIP	DF95560500
C622		4822 123 30387	MICA 2200pF ±5% CHIP	DF95222030
C623		4822 123 30362	MICA 560pF ±5% CHIP	DF95561510
C631		4822 123 30361	MICA 56pF ±5% 500WV CHIP	DF95560500
C632		4822 123 30387	MICA 2200pF ±5% CHIP	DF95222030
C633		4822 123 30362	MICA 560pF ±5% CHIP	DF95561510
C635		4822 122 32669	CER. 0.047µF +80% -20% CHIP	DK58473300
C636		4822 122 32669	CER. 0.047µF +80% -20% CHIP	DK58473300
C637		4822 124 22039	ELECT 220µF 16V	OA22701650
C638		4822 124 22039	ELECT 220µF 16V	OA22701650
C641		4822 124 22039	ELECT 220µF 16V	OA22701650
C642		4822 124 22039	ELECT 220µF 16V	OA22701650
C645			ELECT 100µF 16V NP	EQ107016R0
C646			ELECT100µF 16V NP	EQ107016R0
C651		4822 124 22039	ELECT 220µF 16V	OA22701650
C652		4822 124 22039	ELECT 220µF 16V	OA22701650
C655			ELECT 100µF 16V NP	EQ107016R0
C656			ELECT 100µF 16V NP	EQ107016R0
C683		4822 122 33744	CER. 100pF ±5% 50V CHIP	DD95101300
C688		4822 122 33744	CER. 100pF ±5% 50V CHIP	DD95101300
C693		4822 122 33744	CER. 100pF ±5% 50V CHIP	DD95101300
C694		4822 122 33744	CER. 100pF ±5% 50V CHIP	DD95101300
⚠C803		4822 121 20263	CAP.COMP. SPK KILLER	BF47400010
⚠C806		4822 124 80582	ELECT 4700µF 16V	OA47801620
C807		4822 124 90364	ELECT 220µF 16V	OA22701620
⚠C808		4822 124 80582	ELECT 4700µF 16V	OA47801620
C809		5322 124 41744	ELECT 4700µF 10V	OA47801020
C831		4822 124 90388	ELECT 3300µF 16V	OA33801620
C832		4822 124 90388	ELECT 3300µF 16V	OA33801620
C833		4822 124 41539	ELECT 47µF 16V	OA47601620

POS. NO.	VERS. COLOR	PART NO. (FOR EUROPE)	DISCRIPTION	PART NO. (MJI)
C834		4822 124 41539	ELECT 47µF 16V	OA47601620
C835		4822 124 22039	ELECT 220µF 16V	OA22701650
C836		4822 124 22039	ELECT 220µF 16V	OA22701650
⚠ C853		4822 124 12066	ELECT 4700µF 35V	OB47802520
⚠ C854		4822 124 12066	ELECT 4700µF 35V	OB47802520
C855		4822 124 90354	ELECT 100µF 16V	OA10701620
C856		4822 124 90354	ELECT 100µF 16V	OA10701620
C857		4822 124 22722	ELECT 100µF 16V	OA10801620
C858		4822 124 22722	ELECT 100µF 16V	OA10801620
			PP16-RESISTORS CHIP	
⚠ RD01		4822 116 60309	2.2 Ω ±5% 1/4W FUSIBLE	NH05022140
⚠ RD02		4822 116 60309	2.2 Ω ±5% 1/4W FUSIBLE	NH05022140
RD03		4822 111 91369	1.5 kΩ ±5% 1/10W	NI05152110
RD04		4822 116 83255	3.3 kΩ ±1% 1/10W	NI01332110
RD05		4822 116 83352	560 Ω ±5% 1/10W	NI05561110
RD06		4822 116 83255	3.3 kΩ ±1% 1/10W	NI01332110
RD07		4822 117 11976	13 kΩ ±1% 1/10W	NI01133110
RD08		4822 117 11976	13 kΩ ±1% 1/10W	NI01133110
⚠ RD09		4822 116 60309	2.2 Ω ±5% 1/4W FUSIBLE	NH05022140
⚠ RD10		4822 116 60309	2.2 Ω ±5%1/4W FUSIBLE	NH05022140
RD11		4822 117 11976	13 kΩ ±1% 1/10W	NI01133110
RD12		4822 117 11976	13 kΩ ±1% 1/10W	NI01133110
RD13		4822 116 83352	560 Ω ±5% 1/10W	NI05561110
RD14		4822 116 83255	3.3 kΩ ±1% 1/10W	NI01332110
RD15		4822 111 91369	1.5 kΩ ±5% 1/10W	NI05152110
RD16		4822 116 83255	3.3 kΩ ±1% 1/10W	NI01332110
⚠ RD17		4822 116 60309	2.2 Ω ±5% 1/4W FUSIBLE	NH05022140
⚠ RD18		4822 116 60309	2.2 Ω ±5% 1/4W FUSIBLE	NH05022140
⚠ RD19		4822 117 10145	3.3 Ω ±5% 1/10W FUSIBLE	NH85033110
⚠ RD21		4822 116 60309	2.2 Ω ±5% 1/4W FUSIBLE	NH05022140
⚠ RD22		4822 116 60309	2.2 Ω ±5% 1/4W FUSIBLE	NH05022140
RD23		4822 111 91369	1.5 kΩ ±5% 1/10W	NI05152110
RD24		4822 116 83255	3.3 kΩ ±1% 1/10W	NI01332110
RD25		4822 116 83352	560 Ω ±5% 1/10W	NI05561110
RD26		4822 116 83255	3.3 kΩ ±1%1/10W	NI01332110
RD27		4822 117 11976	13 kΩ ±1% 1/10W	NI01133110
RD28		4822 117 11976	13 kΩ ±1% 1/10W	NI01133110
⚠ RD29		4822 116 60309	2.2 Ω ±5% 1/4W FUSIBLE	NH05022140
⚠ RD30		4822 116 60309	2.2 Ω ±5% 1/4W FUSIBLE	NH05022140
RD31		4822 117 11976	13 kΩ ±1% 1/10W	NI01133110
RD32		4822 117 11976	13 kΩ ±1% 1/10W	NI01133110
RD33		4822 116 83352	560 Ω ±5% 1/10W	NI05561110
RD34		4822 116 83255	3.3 kΩ ±1% 1/10W	NI01332110
RD35		4822 111 91369	1.5 kΩ ±5% 1/10W	NI05152110
RD36		4822 116 83255	3.3 kΩ ±1% 1/10W	NI01332110
⚠ RD37		4822 116 60309	2.2 Ω ±5% 1/4W FUSIBLE	NH05022140
⚠ RD38		4822 116 60309	2.2 Ω ±5% 1/4W FUSIBLE	NH05022140
⚠ RD39		4822 117 10145	3.3 Ω ±5% 1/10W FUSIBLE	NH85033140
⚠ RF01		4822 116 60309	2.2 Ω ±5% 1/4W FUSIBLE	NH05022140
RF02		4822 051 30105	1MΩ ±5% 1/16W	NN05105610
RF09				
∫		4822 051 30223	22 kΩ ±5% 1/16W	NN05223610
RF15				
RF16		4822 051 30103	10 kΩ ±5% 1/16W	NN05103610
RF17		4822 051 30223	22 kΩ ±5% 1/16W	NN05223610
RF18		4822 051 30224	220 kΩ ±5% 1/16W	NN05224610
RF19		4822 051 30223	22 kΩ ±5% 1/16W	NN05223610
RF21		4822 051 30223	22 kΩ ±5% 1/16W	NN05223610
RF22		4822 051 30223	22 kΩ ±5% 1/16W	NN05223610
RF23		4822 051 30223	22 kΩ ±5% 1/16W	NN05223610
RF27		4822 051 30223	22 kΩ ±5% 1/16W	NN05223610
RF28		4822 116 82487	0 Ω ±5% 1/16W	NN05000610
RF30		4822 051 30223	22 kΩ ±5% 1/16W	NN05223610

(VERS. : VERSION, U : U.S.A., F : JAPAN, K : FAR EAST, /XX : EUROPE)

POS. NO.	VERS. COLOR	PART NO. (FOR EUROPE)	DISCRIPTION	PART NO. (MJI)
RF31		4822 051 30103	10 kΩ ±5% 1/16W	NN05103610
RF52		4822 051 30103	10 kΩ ±5% 1/16W	NN05103610
RF53		4822 051 30222	2.2 kΩ ±5% 1/16W	NN05222610
RF54		4822 051 30103	10 kΩ ±5% 1/16W	NN05103610
RF55		4822 051 30103	10 kΩ ±5% 1/16W	NN05103610
RF56		4822 051 30473	47 kΩ ±5% 1/16W	NN05473610
RF57		4822 051 30472	4.7 kΩ ±5% 1/16W	NN05472610
RF58		4822 051 30101	100 Ω ±5% 1/16W	NN05101610
RH01		4822 116 83255	3.3 kΩ ±1% 1/10W	NI01332110
RH02		4822 116 83253	1.5 kΩ±1% 1/10W	NI01152110
RH03		4822 116 83255	3.3 kΩ ±1% 1/10W	NI01332110
RH04		4822 116 83229	33 kΩ ±1% 1/10W	NI01333110
RH05		4822 116 90503	150 Ω ±5% 1/10W	NI05151110
RH06		4822 116 90503	150 Ω ±5% 1/10W	NI05151110
RH07		4822 116 83255	3.3 kΩ ±1% 1/10W	NI01332110
RH08		4822 116 83253	1.5 kΩ ±1% 1/10W	NI01152110
RH09		4822 111 90893	100 Ω ±5% 1/10W	NI05101110
RH10		4822 111 90893	100 Ω ±5% 1/10W	NI05101110
RH11		4822 111 90893	100 Ω ±5% 1/10W	NI05101110
RH12		4822 116 83229	33 kΩ ±1% 1/10W	NI01333110
RH13		4822 116 83352	560 Ω ±5% 1/10W	NI05561110
RH14		4822 116 83352	560 Ω ±5% 1/10W	NI05561110
⚠RH16		4822 115 90198	33 Ω ±2% 1/4W FUSE	NF02330140
⚠RH17		4822 115 90198	33 Ω ±2% 1/4W FUSE	NF02330140
RH21		4822 116 83255	3.3 kΩ ±1% 1/10W	NI01332110
RH22		4822 116 83253	1.5 kΩ ±1% 1/10W	NI01152110
RH23		4822 116 83255	3.3 kΩ ±1% 1/10W	NI01332110
RH24		4822 116 83229	33 kΩ ±1% 1/10W	NI01333110
RH25		4822 116 90503	150 Ω ±5% 1/10W	NI05151110
RH26		4822 116 90503	150 Ω ±5% 1/10W	NI05151110
RH27		4822 116 83255	3.3 kΩ ±1% 1/10W	NI01332110
RH28		4822 116 83253	1.5 kΩ ±1% 1/10W	NI01152110
RH29		4822 111 90893	100 Ω ±5% 1/10W	NI05101110
RH30		4822 111 90893	100 Ω ±5% 1/10W	NI05101110
RH31		4822 111 90893	100 Ω ±5% 1/10W	NI05101110
RH32		4822 116 83229	33 kΩ ±1% 1/10W	NI01333110
RH33		4822 116 83352	560 Ω ±5% 1/10W	NI05561110
RH34		4822 116 83352	560 Ω ±5% 1/10W	NI05561110
⚠RH36		4822 115 90198	33 Ω ±2% 1/4W FUSE	NF02330140
⚠RH37		4822 115 90198	33 Ω ±2% 1/4W FUSE	NF02330140
RH41		4822 116 83255	3.3 kΩ ±1% 1/10W	NI01332110
RH42		4822 116 83253	1.5 kΩ ±1% 1/10W	NI01152110
RH43		4822 116 83255	3.3 kΩ ±1% 1/10W	NI01332110
RH44		4822 116 83229	33 kΩ ±1% 1/10W	NI01333110
RH45		4822 116 90503	150 Ω ±5% 1/10W	NI05151110
RH46		4822 116 90503	150 Ω ±5% 1/10W	NI05151110
RH47		4822 116 83255	3.3 kΩ ±1% 1/10W	NI01332110
RH48		4822 116 83253	1.5 kΩ ±1% 1/10W	NI01152110
RH49		4822 111 90893	100 Ω ±5% 1/10W	NI05101110
RH50		4822 111 90893	100 Ω ±5% 1/10W	NI05101110
RH51		4822 111 90893	100 Ω ±5% 1/10W	NI05101110
RH52		4822 116 83229	33 kΩ ±1% 1/10W	NI01333110
RH53		4822 116 83352	560 Ω ±5% 1/10W	NI05561110
RH54		4822 116 83352	560 Ω ±5% 1/10W	NI05561110
⚠RH56		4822 115 90198	33 Ω ±2% 1/4W FUSE	NF02330140
⚠RH57		4822 115 90198	33 Ω ±2% 1/4W FUSE	NF02330140
RH61		4822 116 83255	3.3 kΩ ±1% 1/10W	NI01332110
RH62		4822 116 83253	1.5 kΩ ±1% 1/10W	NI01152110
RH63		4822 116 83255	3.3 kΩ ±1% 1/10W	NI01332110
RH64		4822 116 83229	33 kΩ ±1% 1/10W	NI01333110
RH65		4822 116 90503	150 Ω ±5% 1/10W	NI05151110
RH66		4822 116 90503	150 Ω ±5% 1/10W	NI05151110
RH67		4822 116 83255	3.3 kΩ ±1% 1/10W	NI01332110

POS. NO.	VERS. COLOR	PART NO. (FOR EUROPE)	DISCRIPTION	PART NO. (MJI)
RH68		4822 116 83253	1.5 kΩ ±1% 1/10W	NI01152110
RH69		4822 111 90893	100 Ω ±5% 1/10W	NI05101110
RH70		4822 111 90893	100 Ω ±5% 1/10W	NI05101110
RH71		4822 111 90893	100 Ω ±5% 1/10W	NI05101110
RH72		4822 116 83229	33 kΩ ±1% 1/10W	NI01333110
RH73		4822 116 83352	560 Ω ±5% 1/10W	NI05561110
RH74		4822 116 83352	560 Ω ±5% 1/10W	NI05561110
⚠RH76		4822 115 90198	33 Ω ±2% 1/4W FUSE	NF02330140
⚠RH77		4822 115 90198	33 Ω ±2% 1/4W FUSE	NF02330140
RN02		4822 117 11977	3.9 MΩ ±5% 1/16W	NN05395610
RN03		4822 051 30223	22 kΩ ±5% 1/16W	NN05223610
RN04		4822 051 30473	47 kΩ ±5% 1/16W	NN05473610
RN05		4822 051 30103	10 kΩ ±5% 1/16W	NN05103610
RN07		4822 051 30223	22 kΩ ±5% 1/16W	NN05223610
RN08		4822 051 30473	47 kΩ ±5% 1/16W	NN05473610
RN10		4822 051 30103	10 kΩ ±5% 1/16W	NN05103610
⚠RN11		4822 116 60309	2.2 Ω ±5% 1/4W FUSIBLE	NH05022140
RN12		4822 051 30472	4.7 kΩ ±5% 1/16W	NN05472610
RN13		4822 051 30472	4.7 kΩ ±5% 1/16W	NN05472610
RN20		4822 116 83352	560 Ω ±5% 1/10W	NI05561110
RN21		4822 051 30103	10 kΩ ±5% 1/16W	NN05103610
RN22		4822 051 30104	100 kΩ ±5% 1/16W	NN05104610
RN23		4822 051 30332	3.3 kΩ ±5% 1/16W	NN05332610
RN24		4822 051 30473	47 kΩ ±5% 1/16W	NN05473610
RN25		4822 051 30333	33 kΩ ±5% 1/16W	NN05333610
RN26		4822 051 30104	100 kΩ ±5% 1/16W	NN05104610
RN27		4822 051 30332	3.3 kΩ ±5% 1/16W	NN05332610
⚠RN28		4822 116 60309	2.2 Ω ±5% 1/4W FUSIBLE	NH05022140
RT02		4822 051 30339	3.3 Ω ±5% 1/16W	NN05330610
RT04		4822 051 30759	75 Ω ±5% 1/16W	NN05750610
RY51		4822 051 30223	22 kΩ ±5% 1/16W	NN05223610
RY52		4822 051 30223	22 kΩ ±5% 1/16W	NN05223610
RY53		4822 051 30473	47 kΩ ±5% 1/16W	NN05473610
RY54		4822 051 30473	47 kΩ ±5% 1/16W	NN05473610
RY55		4822 051 30473	47 kΩ ±5% 1/16W	NN05473610
RY56		4822 051 30103	10 kΩ ±5% 1/16W	NN05103610
R100		4822 051 30103	10 kΩ ±5% 1/16W	NN05103610
R101		4822 051 30103	10 kΩ ±5% 1/16W	NN05103610
R105		4822 051 30102	1 kΩ ±5% 1/16W	NN05102610
R106		4822 051 30223	22 kΩ ±5% 1/16W	NN05223610
R107		4822 051 30274	270 kΩ ±5% 1/16W	NN05274610
R109		4822 051 30104	100 kΩ ±5% 1/16W	NN05104610
R111		4822 116 83208	12 kΩ ±5% 1/16W	NN05123610
R112		4822 116 83208	12 kΩ ±5% 1/16W	NN05123610
R113		4822 116 83208	12 kΩ ±5% 1/16W	NN05123610
R114		4822 051 30101	100 Ω ±5% 1/16W	NN05101610
R115		4822 116 83208	12 kΩ ±5% 1/16W	NN05123610
R116		4822 116 83208	12 kΩ ±5% 1/16W	NN05123610
⚠R117		4822 116 60309	2.2 Ω ±5% 1/4W FUSIBLE	NH05022140
⚠R118		4822 116 60309	2.2 Ω ±5% 1/4W FUSIBLE	NH05022140
R119		4822 051 30471	470 Ω ±5% 1/16W	NN05471610
R120		4822 051 30104	100 kΩ ±5% 1/16W	NN05104610
R121		4822 051 30101	100 Ω ±5% 1/16W	NN05101610
R124		4822 051 30471	470 Ω ±5% 1/16W	NN05471610
R125		4822 051 30102	1 kΩ ±5% 1/16W	NN05102610
R126		4822 051 30102	1 kΩ ±5% 1/16W	NN05102610
R127		4822 051 30471	470 Ω ±5% 1/16W	NN05471610
R128		4822 051 30391	390 Ω ±5% 1/16W	NN05391610
R131		4822 051 30471	470 Ω ±5% 1/16W	NN05471610
R132		4822 116 83208	12 kΩ ±5% 1/16W	NN05123610
R135		4822 051 30682	6.8 kΩ ±5% 1/16W	NN05682610

(VERS. : VERSION, U : U.S.A., F : JAPAN, K : FAR EAST, /XX : EUROPE)

POS. NO.	VERS. COLOR	PART NO. (FOR EUROPE)	DISCRIPTION	PART NO. (MJI)
R136		4822 051 30682	6.8 kΩ ±5% 1/16W	NN05682610
R137		4822 051 30682	6.8 kΩ ±5% 1/16W	NN05682610
R146		4822 051 30223	22 kΩ ±5% 1/16W	NN05223610
R324				
∫		4822 116 82487	0 Ω ±5% 1/16W	NN05000610
R327				
R331		4822 051 30223	22 kΩ ±5% 1/16W	NN05223610
R332		4822 051 30223	22 kΩ ±5% 1/16W	NN05223610
R334		4822 116 83219	820 Ω ±5% 1/16W	NN05821610
R335		4822 051 30334	330 kΩ ±5% 1/16W	NN05334610
R351		4822 116 82487	0 Ω ±5% 1/16W	NN05000610
R352		4822 116 82487	0 Ω ±5% 1/16W	NN05000610
R501		4822 051 30101	100 Ω ±5% 1/16W	NN05101610
R502		4822 051 30101	100 Ω ±5% 1/16W	NN05101610
R503		4822 051 30101	100 Ω ±5% 1/16W	NN05101610
R511		4822 051 30104	100 kΩ ±5% 1/16W	NN05104610
⚠R512		4822 116 60309	2.2 Ω ±5% 1/4W FUSIBLE	NH05022140
R515				
∫		4822 051 30101	100 Ω ±5% 1/16W	NN05101610
R520				
R521		4822 051 30223	22 kΩ ±5% 1/16W	NN05223610
R522		4822 051 30223	22 kΩ ±5% 1/16W	NN05223610
R601		4822 117 10439	3.32 kΩ ±1% 1/6W NON CHIP	GM11633210
R602		4822 117 10439	3.32 kΩ ±1% 1/6W NON CHIP	GM11633210
R603		4822 116 82752	10 kΩ ±1% 1/6W NON CHIP	GM11610020
R604		4822 116 82752	10 kΩ ±1% 1/6W NON CHIP	GM11610020
R605		4822 117 10183	2.61 kΩ ±1% 1/10W	NI01262110
R606		4822 117 10183	2.61 kΩ ±1% 1/10W	NI01262110
⚠R608		4822 116 60307	1.0 Ω ±5% 1/4W FUSIBLE	NH05010140
⚠R609		4822 116 60307	1.0 Ω ±5% 1/4W FUSIBLE	NH05010140
R611		4822 117 10439	3.32 kΩ ±1% 1/6W NON CHIP	GM11633210
R612		4822 117 10439	3.32 kΩ ±1% 1/6W NON CHIP	GM11633210
R613		4822 116 82752	10 kΩ ±1% 1/6W NON CHIP	GM11610020
R614		4822 116 82752	10 kΩ ±1% 1/6W NON CHIP	GM11610020
R615		4822 117 10183	2.61 kΩ ±1% 1/10W	NI01262110
R616		4822 117 10183	2.61 kΩ ±1% 1/10W	NI01262110
R621		4822 117 10439	3.32 kΩ ±1% 1/6W NON CHIP	GM11633210
R622		4822 117 10439	3.32 kΩ ±1% 1/6W NON CHIP	GM11633210
R623		4822 116 82752	10 kΩ ±1% 1/6W NON CHIP	GM11610020
R624		4822 116 82752	10 kΩ ±1% 1/6W NON CHIP	GM11610020
R625		4822 117 10183	2.6 kΩ ±1% 1/10W	NI01262110
R626		4822 117 10183	2.6 kΩ ±1% 1/10W	NI01262110
⚠R628		4822 116 60307	1.0 Ω ±5% 1/4W FUSIBLE	NH05010140
⚠R629		4822 116 60307	1.0 Ω ±5% 1/4W FUSIBLE	NH05010140
R631		4822 117 10439	3.32 kΩ ±1% 1/6W NON CHIP	GM11633210
R632		4822 117 10439	3.32 kΩ ±1% 1/6W NON CHIP	GM11633210
R633		4822 116 82752	10 kΩ ±1% 1/6W NON CHIP	GM11610020
R634		4822 116 82752	10 kΩ ±1% 1/6W NON CHIP	GM11610020
R635		4822 117 10183	2.6 kΩ ±1% 1/10W	NI01262110
R636		4822 117 10183	2.6 kΩ ±1% 1/10W	NI01262110
⚠R641		4822 116 60307	1.0 Ω ±5% 1/4W FUSIBLE	NH05010140
R642		4822 111 90895	10 kΩ ±5% 1/10W	NI05103110
R643		4822 111 90896	100 kΩ ±5% 1/10W	NI05104110
R644		4822 111 90893	100 Ω ±5% 1/10W	NI05101110
⚠R646		4822 116 60307	1.0 Ω ±5% 1/4W FUSIBLE	NH05010140
R647		4822 111 90893	100 Ω ±5% 1/10W	NI05101110
R648		4822 111 90896	100 kΩ ±5% 1/10W	NI05104110
R649		4822 111 90895	10 kΩ ±5% 1/10W	NI05103110
⚠R651		4822 116 60307	1.0 Ω ±5% 1/4W FUSIBLE	NH05010140
R652		4822 111 90895	10 kΩ ±5% 1/10W	NI05103110
R653		4822 111 90896	100 kΩ ±5% 1/10W	NI05104110
R654		4822 111 90893	100 Ω ±5% 1/10W	NI05101110
⚠R656		4822 116 60307	1.0 Ω ±5% 1/4W FUSIBLE	NH05010140
R657		4822 111 90895	10 kΩ ±5% 1/10W	NI05103110

POS. NO.	VERS. COLOR	PART NO. (FOR EUROPE)	DISCRIPTION	PART NO. (MJI)
R658		4822 111 90896	100 kΩ ±5% 1/10W	NI05104110
R659		4822 111 90893	100 Ω ±5% 1/10W	NI05101110
R801		4822 053 11102	100 Ω ±5% 2W NON CHIP	GA05101020
R835			0 Ω ±5% 1/6W NON CHIP	GD05000160
R836			0 Ω ±5% 1/6W NON CHIP	GD05000160
			PP16-RESISTORS (COMMON)	
R***			CARBON FILM FIXED RESISTOR ±5% 1/6W : RH15 RH35 RH55 RH75 RN01 RN06 RY57 RY58 R833 R834 R855 R856	
			PP16-SEMICONDUCTORS	
DF51		4822 130 83629	DIODE DA114 CHIP	HZ20010210
DH01		4822 130 81148	DIODE IMN10 ARRAY CHIP	HZ20007210
DH02		4822 130 81324	DIODE 1SS302 CHIP	HZ20018050
DH11		4822 130 81148	DIODE IMN10 ARRAY CHIP	HZ20007210
DH12		4822 130 81324	DIODE 1SS302 CHIP	HZ20018050
DH21		4822 130 81148	DIODE IMN10 ARRAY CHIP	HZ20007210
DH22		4822 130 81324	DIODE 1SS302 CHIP	HZ20018050
DH31		4822 130 81148	DIODE IMN10 ARRAY CHIP	HZ20007210
DH32		4822 130 81324	DIODE 1SS302 CHIP	HZ20018050
⚠DN01				
∫		4822 130 80839	DIODE S5688G 1A 400V	HD20029050
⚠DN04				
DN05		4822 130 80321	ZENER DIODE RD10JB2 MTZJ10C	HD31001000
DN09		4822 130 33948	ZENER DIODE RD5.6JB2 MTZJ5.6B	HD30561000
DN10		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
DN11		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
DN12		4822 130 83715	DIODE 1SS301 DAN202U CHIP	HZ21005000
DY11		4822 130 33759	ZENER DIODE RD4.7JB2/MTZJ4.7B	HD30471000
⚠DY61				
∫		4822 130 80839	DIODE S5688G 1A 400V	HD20029050
⚠DY64				
DY65		4822 130 80318	ZENER DIODE RD6.8JB2 MTZJ6.8C	HD30681000
D101		4822 130 80523	DIODE DA204U	HZ20008210
D651		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
⚠D801				
∫		4822 130 80839	DIODE S5688G 1A 400V	HD20029050
⚠D810				
D831		4822 130 80318	ZENER DIODE RD6.8JB2 MTZJ6.8C	HD30681000
D832		4822 130 80318	ZENER DIODE RD6.8JB2 MTZJ6.8C	HD30681000
D833		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
D834		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
⚠D851				
∫		4822 130 82422	DIODE EK16LF 1.5A 60V	HD20041080
⚠D854				
D855		4822 130 80623	ZENER DIODE RD13JB2 MTZJ13B	HD31301000
D856		4822 130 80623	ZENER DIODE RD13JB2 MTZJ13B	HD31301000
D857		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000

(VERS. : VERSION, U : U.S.A., F : JAPAN, K : FAR EAST, /XX : EUROPE)

POS. NO.	VERS. COLOR	PART NO. (FOR EUROPE)	DISCRIPTION	PART NO. (MJI)
D858		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
QD01		4822 209 31355	IC TDA1547 DAC7	HC10066490
QD02		4822 209 31355	IC TDA1547 DAC7	HC10066490
QF01		4822 209 15919	MICROPOCESSOR MN187164 MAIN CPU 64PIN	HU329KA000
QF03		4822 209 15921	IC S-806D-Z RESET	HC10077530
QF51		4822 111 92186	DIG.TRS. HN1C01F G	BA20015050
QF53		4822 130 61311	TRS. 2SA1162 O Y CHIP	HX111622A0
QH01		4822 130 42843	F.E.T. 2SK389 GR BL	HF203892A0
QH03		4822 130 61425	TRS. 2SC2873 Y CHIP	HX328731B0
QH05		4822 130 63928	TRS. 2SA1312 B CHIP	HX113121B0
QH06		4822 130 63928	TRS. 2SA1312 B CHIP	HX113121B0
QH07		4822 130 63929	TRS. 2SC3324 B CHIP	HX333241B0
QH08		5322 130 41844	F.E.T. 2SK170 V	HF201701H0
QH09		4822 130 62649	F.E.T. 2SJ74 V	HF100741H0
QH11		4822 130 42843	F.E.T. 2SK389 GR BL	HF203892A0
QH13		4822 130 61425	TRS. 2SC2873 Y CHIP	HX328731B0
QH15		4822 130 63928	TRS. 2SA1312 B CHIP	HX113121B0
QH16		4822 130 63928	TRS. 2SA1312 B CHIP	HX113121B0
QH17		4822 130 63929	TRS. 2SC3324 B CHIP	HX333241B0
QH18		5322 130 41844	F.E.T. 2SK170 V	HF201701H0
QH19		4822 130 62649	F.E.T. 2SJ74 V	HF100741H0
QH31		4822 130 42843	F.E.T. 2SK389 GR BL	HF203892A0
QH33		4822 130 61425	TRS. 2SC2873 Y CHIP	HX328731B0
QH35		4822 130 63928	TRS. 2SA1312 B CHIP	HX113121B0
QH36		4822 130 63928	TRS. 2SA1312 B CHIP	HX113121B0
QH37		4822 130 63929	TRS. 2SC3324 B CHIP	HX333241B0
QH38		5322 130 41844	F.E.T. 2SK170 V	HF201701H0
QH39		4822 130 62649	F.E.T. 2SJ74 V	HF100741H0
QH41		4822 130 42843	F.E.T. 2SK389 GR BL	HF203892A0
QH43		4822 130 61425	TRS. 2SC2873 Y CHIP	HX328731B0
QH45		4822 130 63928	TRS. 2SA1312 B CHIP	HX113121B0
QH46		4822 130 63928	TRS. 2SA1312 B CHIP	HX113121B0
QH47		4822 130 63929	TRS. 2SC3324 B CHIP	HX333241B0
QH48		5322 130 41844	F.E.T. 2SK170 V	HF201701H0
QH49		4822 130 62649	F.E.T. 2SJ74 V	HF100741H0
QN01		4822 111 92186	DIG.TRS. HN1C01F G	BA20015050
QN02		4822 111 92186	DIG.TRS. HN1C01F G	BA20015050
QN04		4822 130 60839	TRS. 2SC2458 Y GR	HT324582B0
QN05		4822 130 60107	TRS. 2SA1048 Y GR	HT110482B0
QN07		4822 130 43954	TRS. 2SD999 CHIP	HX409992A0
QN21		4822 209 83312	IC TA7317P	HC10042050
QY11		4822 111 92195	DIG.TRS. HN1A01F Y GR	BA10011050
QY12		4822 130 60839	TRS. 2SC2458 Y GR	HT324582B0
⚠QY61		4822 209 83829	IC NJM79M18FA 0.5A -18V	HC39518090
Q102		4822 209 91174	IC SAA7372GP DEC	HC10132490
Q106		4822 209 61073	IC TDA7073A DRIV.	HC10137490
Q107		4822 209 61073	IC TDA7073A DRIV.	HC10137490
Q108		4822 209 61073	IC TDA7073A DRIV.	HC10137490
Q304		4822 209 32984	IC TC7SU04F	HC10427050
Q306		4822 209 90909	IC TC7W74FU	HC10400050
Q502		4822 209 15923	IC TDA1307	HC10139490
Q601 ∫ Q604		4822 209 91175	IC NJM2114M OP AMP	HC10175090
⚠Q801		4822 209 61847	IC NJM78M05FA 0.5A 5V	HC38505090
⚠Q802		4822 209 61847	IC NJM78M05FA 0.5A 5V	HC38505090
⚠Q831		4822 130 63291	TRS. 2SB1022	HT21022100
⚠Q832		4822 130 63292	TRS. 2SD1417	HT41417100
⚠Q851		4822 130 63291	TRS. 2SB1022	HT21022100
⚠Q852		4822 130 63292	TRS. 2SD1417	HT41417100

POS. NO.	VERS. COLOR	PART NO. (FOR EUROPE)	DISCRIPTION	PART NO. (MJI)
			PP16-MISCELLANEOUS	
⚠F801		4822 070 31002	FUSE T1A 250V	FS10100850
⚠F802		4822 070 31002	FUSE T1A 250V	FS10100850
⚠F851		4822 070 38001	FUSE 800mA 250V	FS10080850
⚠F852		4822 070 38001	FUSE 800mA 250V	FS10080850
JT01		4822 290 81638	TERMINAL 1P RCA	YT02010790
JT02		4822 267 31369	OPT. CONNECTOR GP1F32T	YJ15000090
J103		4822 265 51374	JACK 21P FPC FFC	YJ06010910
⚠J831		4822 256 30329	JACK FUSE CLIP	YJ08000430
⚠J832		4822 267 30978	JACK FUSE CLIP	YJ08000450
⚠J833		4822 256 30329	JACK FUSE CLIP	YJ08000430
⚠J834		4822 267 30978	JACK FUSE CLIP	YJ08000450
⚠J851		4822 256 30329	JACK FUSE CLIP	YJ08000430
⚠J852		4822 267 30978	JACK FUSE CLIP	YJ08000450
⚠J853		4822 256 30329	JACK FUSE CLIP	YJ08000430
⚠J854		4822 267 30978	JACK FUSE CLIP	YJ08000450
LT01		4822 142 60422	PULSE TRANSF. TPS247MN-0386AN	TP41042030
LT04		4822 158 60654	FERRITE CORE,BLM31A02 CHIP	FC90030070
L102		4822 158 60654	FERRITE CORE BLM31A02 CHIP	FC90030070
L103		4822 158 60654	FERRITE CORE BLM31A02 CHIP	FC90030070
L104		4822 158 60654	FERRITE CORE BLM31A02 CHIP	FC90030070
L304		4822 157 11192	INDUCT.,3.3µH NL322522 CHIP	LU12332010
L501		4822 158 60654	FERRITE CORE,BLM31A02 CHIP	FC90030070
L502		4822 158 60654	FERRITE CORE,BLM31A02 CHIP	FC90030070
L601		4822 157 53873	INDUCT.,100µH NL322522 CHIP	LU12104010
L602		4822 157 53873	INDUCT.,100µH NL322522 CHIP	LU12104010
L603 ∫ L606		4822 158 60654	FERRITE CORE,BLM31A02 CHIP	FC90030070
L607		4822 280 10353	RELAY, DC9V	LY20090090
L608		4822 280 10353	RELAY, DC9V	LY20090090
L631		4822 157 53873	INDUCT.,100µH NL322522 CHIP	LU12104010
L632		4822 157 53873	INDUCT.,100µH NL322522 CHIP	LU12104010
XF01		4822 242 80349	CERAMIC RESONATOR 8.0MHz	FQ08004030
X302		4822 242 10818	CRYSTAL 33.8688MHz	JX33001380
			PV16-HF AMP CIRCUIT BOARD	
R122		4822 051 30229	RES. 22 Ω ±5% 1/16W	NN05220610
R123		4822 051 30229	RES. 22 Ω ±5% 1/16W	NN05220610
Q101		4822 209 33992	IC TDA1302T SERVO	HC10136490
			PY16-FRONT CIRCUIT BOARD	
			PY16-CAPACITORS	
CY01		4822 122 40588	CER. 0.022µF ±20% 50V	DA17223110
CY02		4822 124 41539	ELECT 47 µF 16V	OA47601620
CY11		4822 124 41539	ELECT 47 µF 16V	OA47601620
CY12		4822 126 11558	CER. 0.1µF ±20% 50V	DA17104110
CY13		4822 126 11558	CER. 0.1µF ±20% 50V	DA17104110

(VERS. : VERSION, U : U.S.A., F : JAPAN, K : FAR EAST, /XX : EUROPE)

POS. NO.	VERS. COLOR	PART NO. (FOR EUROPE)	DISCRIPTION	PART NO. (MJI)
			PY16-RESISTORS (COMMON)	
R***			CARBON FILM FIXD RESISTOR ±5% 1/6W : RY01~RY04 RY06~RY08 RY13 RY15~RY17	
			PY16-SEMICONDUCTORS	
DY01		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
DY02		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
QY01		4822 209 90244	IC μPD16311GC-AB6	HC10283060
QY02		4822 130 42715	TRS. 2SA608SP 2SA1048 2SA1309 2SA933S	HT10001000
			PY16-MISCELLANEOUS	
LY01		4822 158 60605	FERRITE CORE	FC90050060
LY02		4822 158 60605	FERRITE CORE	FC90050060
LY03		4822 158 60605	FERRITE CORE	FC90050060
SY01 ∫ SY06		4822 276 20508	PUSH SW TACT	SP01011280
VY01		4822 130 90441	DISPLAY UNIT	HQ30801410
ZY01		4822 130 83519	PHOTO UNIT	HW10001210